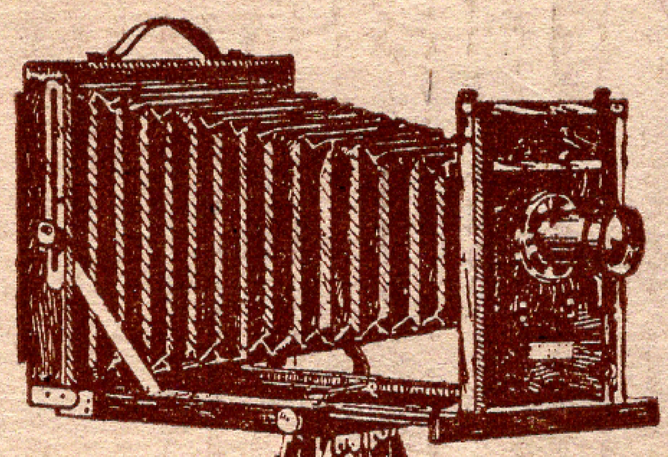
ILLUSTRATED CATALOGUE OF PHOTOGRAPHIC APPARATUS



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88 Madison Street, CHICAGO, ILL.

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We invite a careful and critical examination of this our Annual Catalogue of Photographic Apparatus and Materials, which we have the pleasure to offer.

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DdescriptiveCatalogue

AND

PRICE LIST

OF THE

PHOTOGRAPHIC APPARATUS,

MANUFACTURED BY

ROCHESTER OPTICAL COMPANY,

W. F. CARLTON,

PROPRIETOR AND MANAGER.

SPECIALTY: VIEW CAMERAS FOR AMATEURS AND PROFESSIONALS.

ROCHESTER, N. Y.:

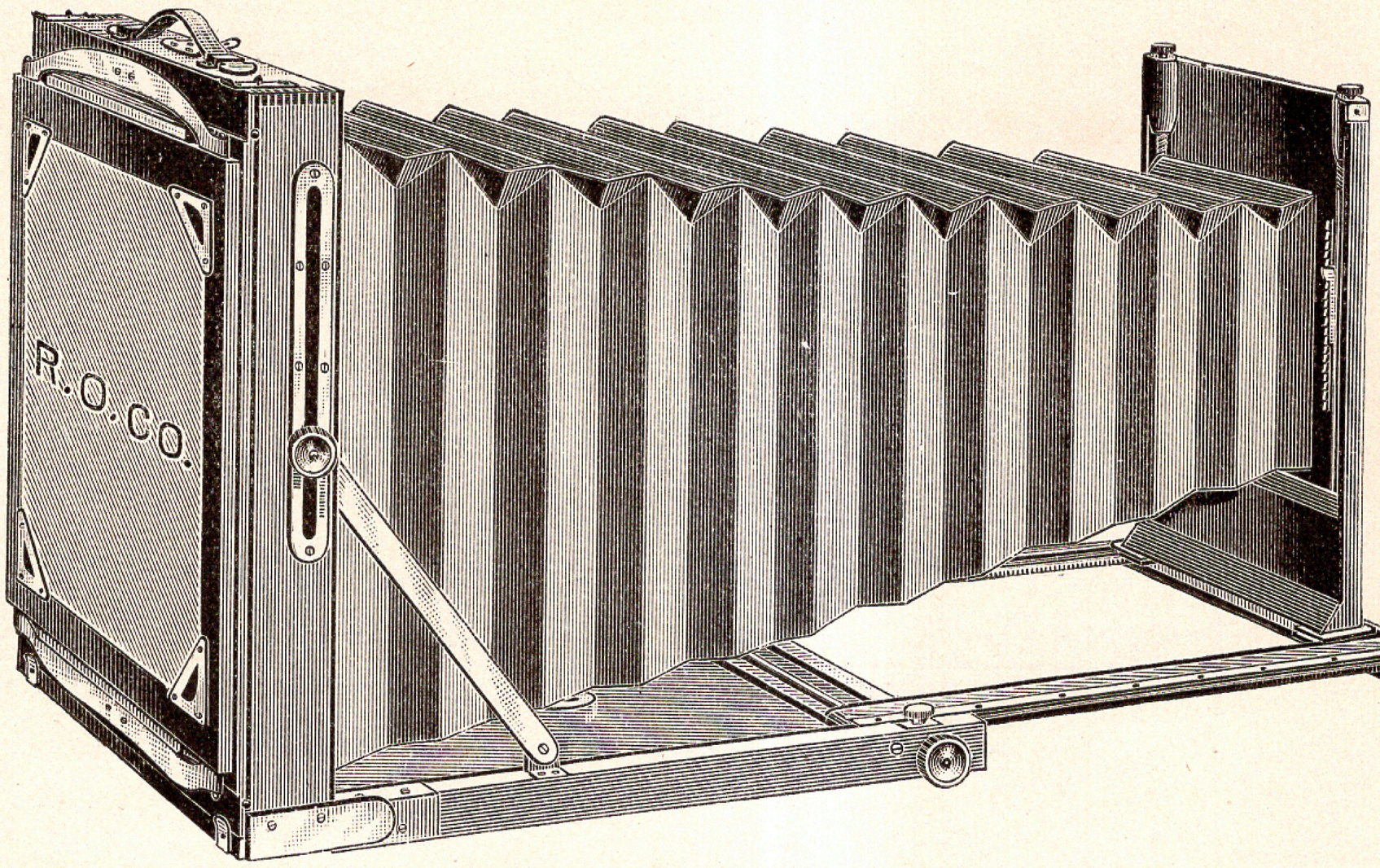
ROCHESTER OPTICAL COMPANY,

5 SOUTH WATER STREET.

MAY, 1891.

THE UNIVERSAL.

REVERSIBLE BACK.



CAMERA FULLY EXTENDED.

The Universal Camera is a modified English pattern and is the most compact camera in market, the 5 x 8 being but $2\frac{3}{4}$ inches thick when folded and weighs but 5 pounds.

It has extra long bellows, the 5 x 8 having a focal capacity of 19 inches and other sizes in proportion; this allows the use of lenses of extreme length of focus, while lenses of the shortest focus can also be used; owing to the extra length of bellows the camera can be used for copying and enlarging, if desired, and in fact is as near a *universal* camera as can well be made.

It is made from selected mahogany, finished in the best possible style, and has all latest improvements. We have spared no pains to make every working point as near perfection as possible.

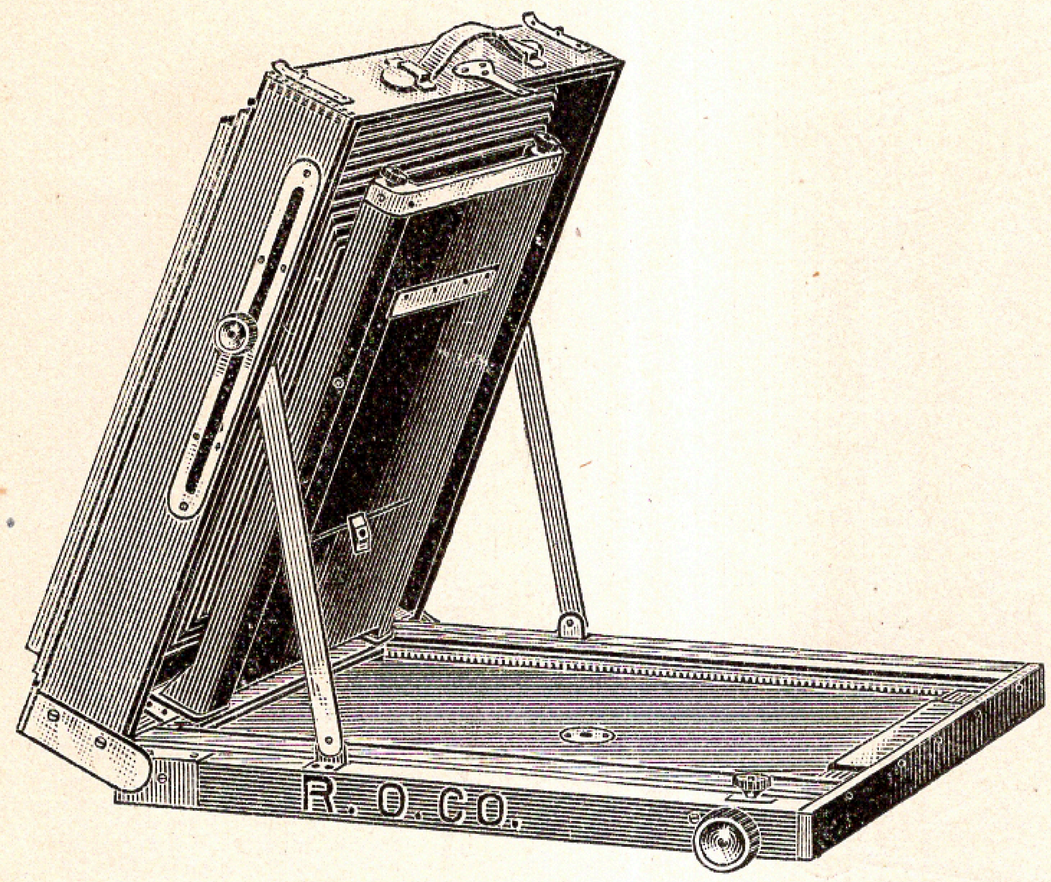
The camera-box is square, the back being reversible, so that when a view be wanted either horizontally or vertically on the plate, the change can be effected in *five seconds* by simply reversing the back instead of the entire camera-box.

The ground-glass frame is held to the camera-back by two springs which allow it to recede so as to insert the holder between the ground glass and camera-back.

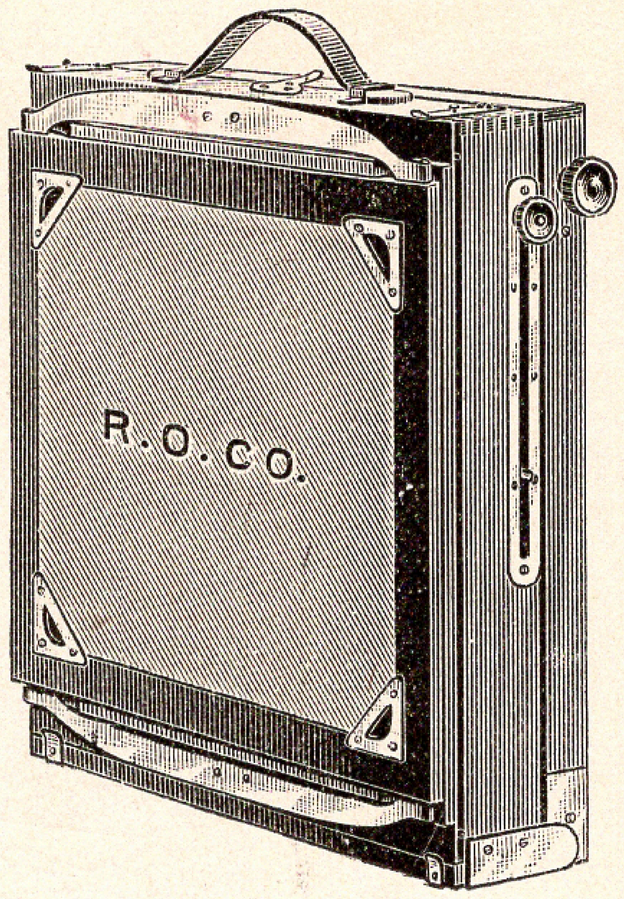
By this method the ground glass is not at all liable to breakage, besides being a most convenient method of applying the plate-holder to the camera.

THE UNIVERSAL.

REVERSIBLE BACK.



PARTIALLY FOLDED.



FOLDED.

The Universal is made with both single and double swing, has swinging front and rising and falling front controlled by a spring acting in a ratchet, doing away with milled heads. The forward end of bellows is attached to the movable front and slides with it, thus avoiding a possibility of cutting off the rays of light.

It has fine rack and pinion, the movement being perfectly smooth. All metal work is of brass, polished and lacquered.

While very compact the Universal is very simple of manipulation, there being no loose screws or parts, and is set up by tightening four milled heads and is folded again by loosening the same number.

It is provided with a leather handle, so that it may be carried without the case if desired, as one holder can be carried between the ground-glass and camera-back.

Price includes Canvas Carrying Case, one Perfection Holder and Combination Tripod, but no lens. (With sizes above 11 x 14 we send English Book-Holder.)

SIZE OF VIEW.	SINGLE SWING.	DOUBLE SWING.
3¼ x 4¼	$27 00	$29 00
4 x 5	28 00	30 00
4¼ x 6½	30 00	32 00
5 x 7	33 00	35 00
5 x 8	36 00	38 00
6½ x 8½	40 00	43 00
8 x 10	45 00	48 00
10 x 12	52 00	56 00
11 x 14	60 00	65 00
14 x 17	72 00	80 00
17 x 20	90 00	100 00

THE IDEAL.

REVERSIBLE BACK.

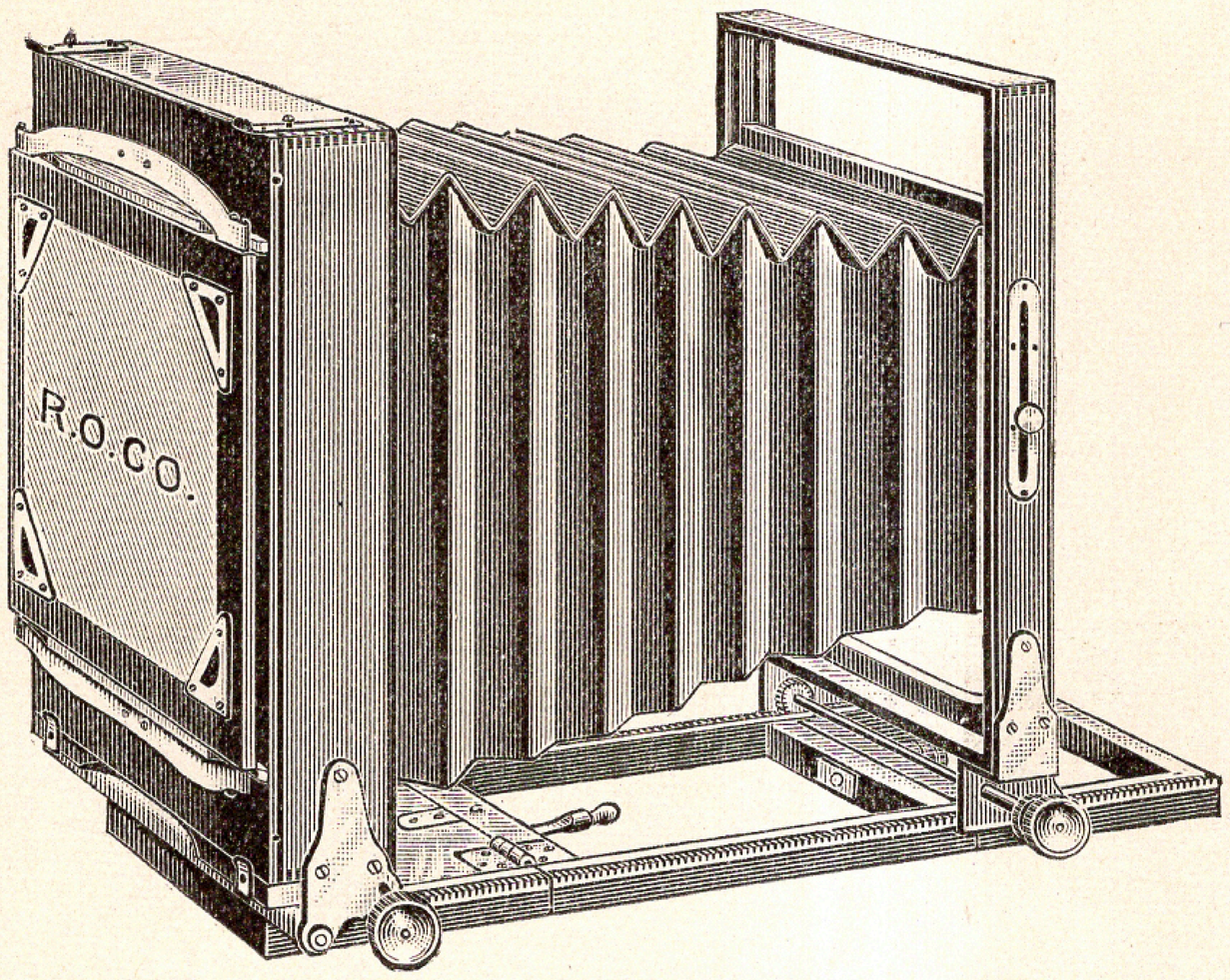


Fig. 1.

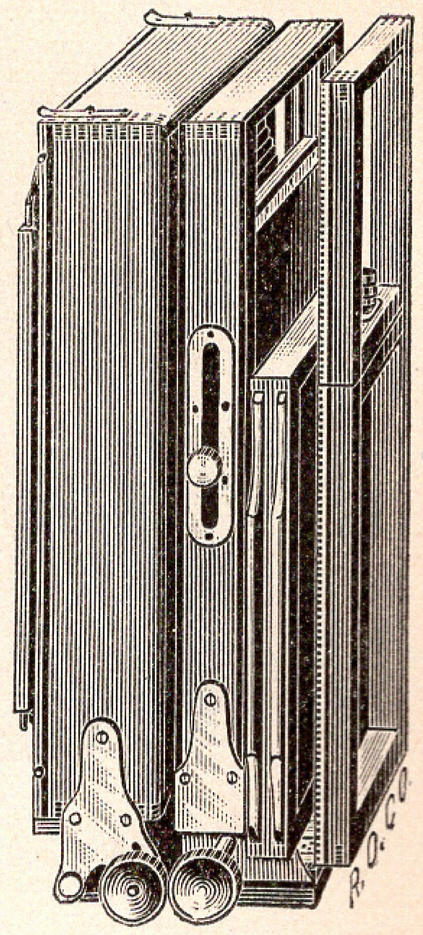


Fig. 2.

The Ideal Camera is pronounced by all to be one of the best view cameras ever placed on the market. It is the result of much study and many experiments, made with the view of producing an instrument combining all the qualities required in a View Camera for the professional or amateur photographer.

It is made of selected mahogany, finished in the best possible style, every part being as near perfect as possible. All metal parts are made of brass, polished and lacquered.

It has reversible back, same as the Universal, with our spring-acting ground glass frame by which the plate-holder is inserted between the ground glass and camera-back.

It has fine rack and pinion focusing movement, the front moving forward leaving the back always stationary. When the focus has been obtained, the front is clamped by turning an independent milled head placed inside the one which turns the pinion.

As is shown in the cut, the bellows is cone shape, though 5 x 7 and above are made with front wide enough for stereoscopic work.

Our method of applying the horizontal swing is very simple, and it takes no additional room, so that the double swing Ideal is no less compact than the single swing.

The bed is in two sections, as, with a lens of short focus, the extra length is not required.

THE IDEAL.

REVERSIBLE BACK.

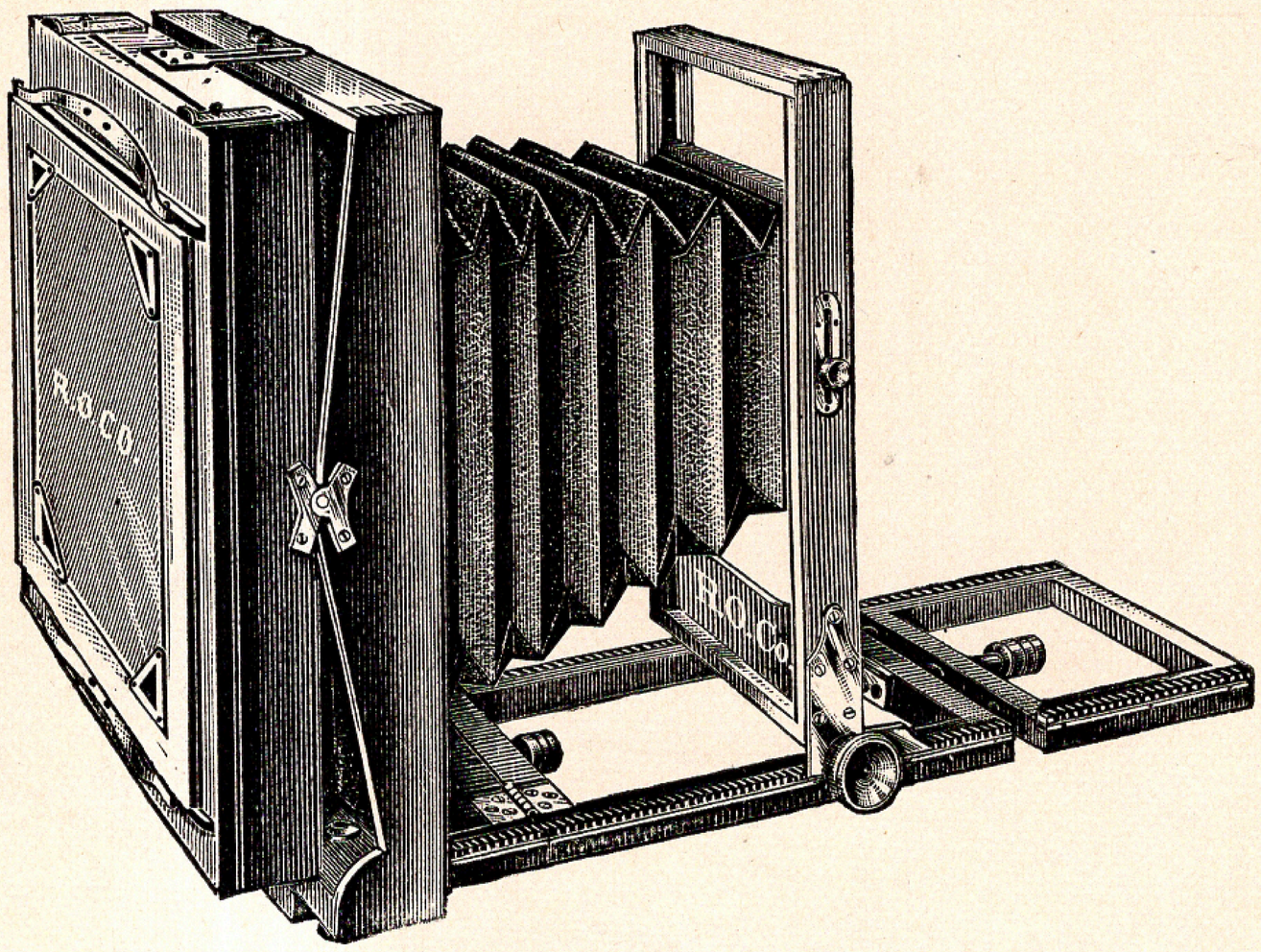


Fig. 3. (8 x 10.)

Taken in its entirety we can recommend the Ideal to both the professional and amateur photographer.

Sizes up to and including 6½ x 8½ are made same as Fig. 1, while 8 x 10 to 11 x 14, inclusive, are made same as Fig. 3.

14 x 17, and larger, are made with back focus and with focusing handle, instead of rack and pinion.

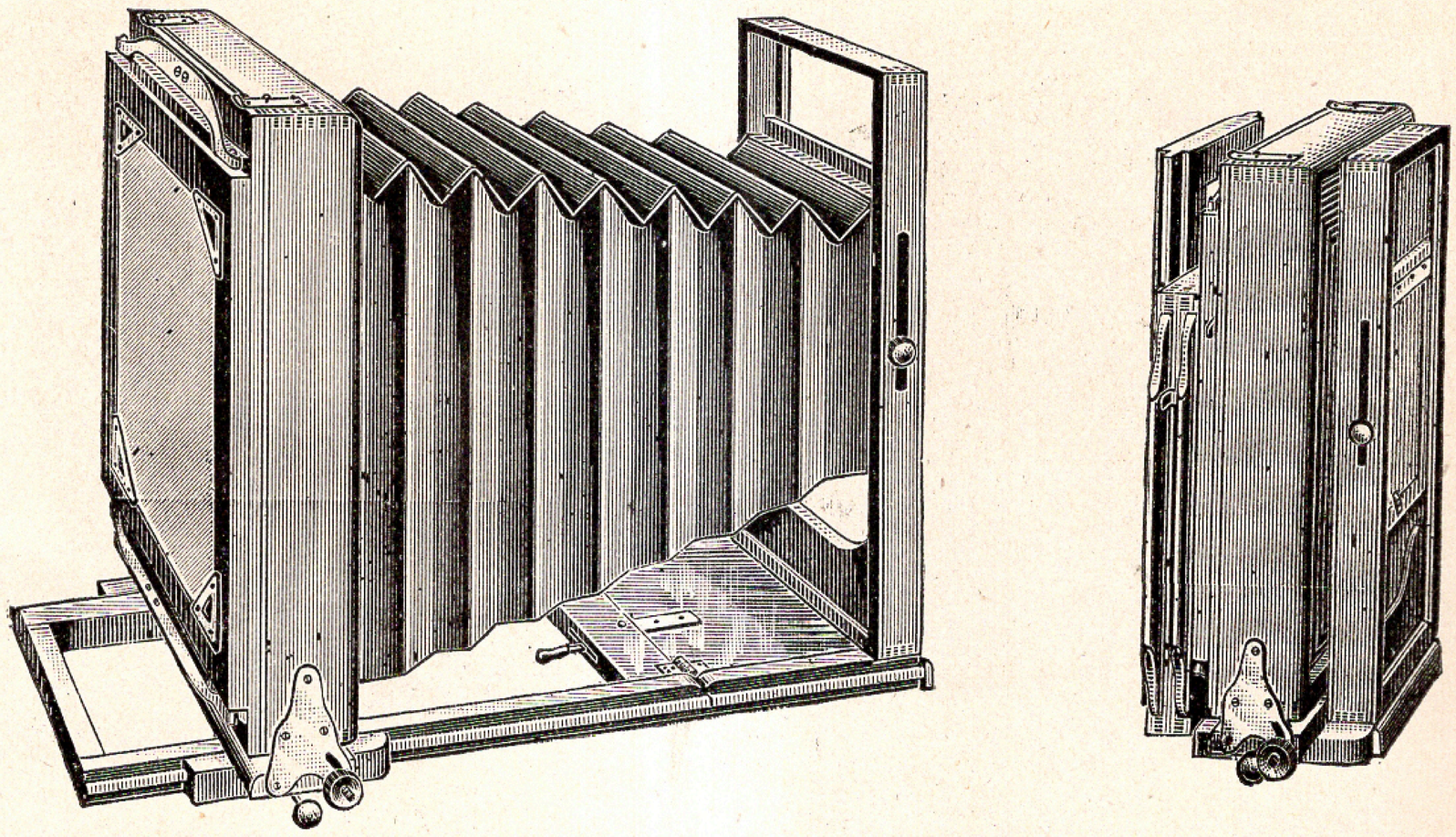
Price includes one Perfection Plate-holder and Canvas Carrying Case, but no lens or tripod.

With sizes above 11 x 14 we send English Book-Holders.

SIZE OF VIEW.	SINGLE SWING.	DOUBLE SWING.
3¼ x 4¼	$17 00	$19 00
4 x 5	18 00	20 00
4¼ x 6½	20 00	22 00
5 x 7	22 00	24 00
5 x 8	25 00	27 00
6½ x 8½	28 00	30 00
8 x 10	33 00	36 00
10 x 12	36 00	40 00
11 x 14	42 00	48 00
14 x 17	56 00	64 00
17 x 20	70 00	80 00
18 x 22	90 00	100 00

THE STANDARD.

REVERSIBLE BACK.



The Standard is made on the same general style as the Ideal, though with back focus and without rack and pinion.

It is the lowest priced reversible back camera in market, and is made for those who desire a good, serviceable, reversible back camera, yet at a low price, and do not care for so finely finished an instrument as the Ideal or Universal.

The Standard is made of mahogany well finished in shellac; the metal parts are of polished and lacquered brass, and as much pains are taken with the working parts as with any of the higher priced cameras.

The reversible back is provided with spring-acting ground glass frame same as Ideal and Universal.

For a serviceable camera, at a moderate price, we can commend the Standard.

Price includes Carrying Case and one Perfection Holder, but no lens or tripod.

SIZE OF VIEW.	SINGLE SWING.	DOUBLE SWING.
3¼ x 4¼	$15 00	$17 00
4 x 5	15 00	17 00
4¼ x 6½	16 00	18 00
5 x 7	18 00	20 00
5 x 8	20 00	22 00
6½ x 8½	22 00	24 00
8 x 10	25 00	28 00

THE PEERLESS.

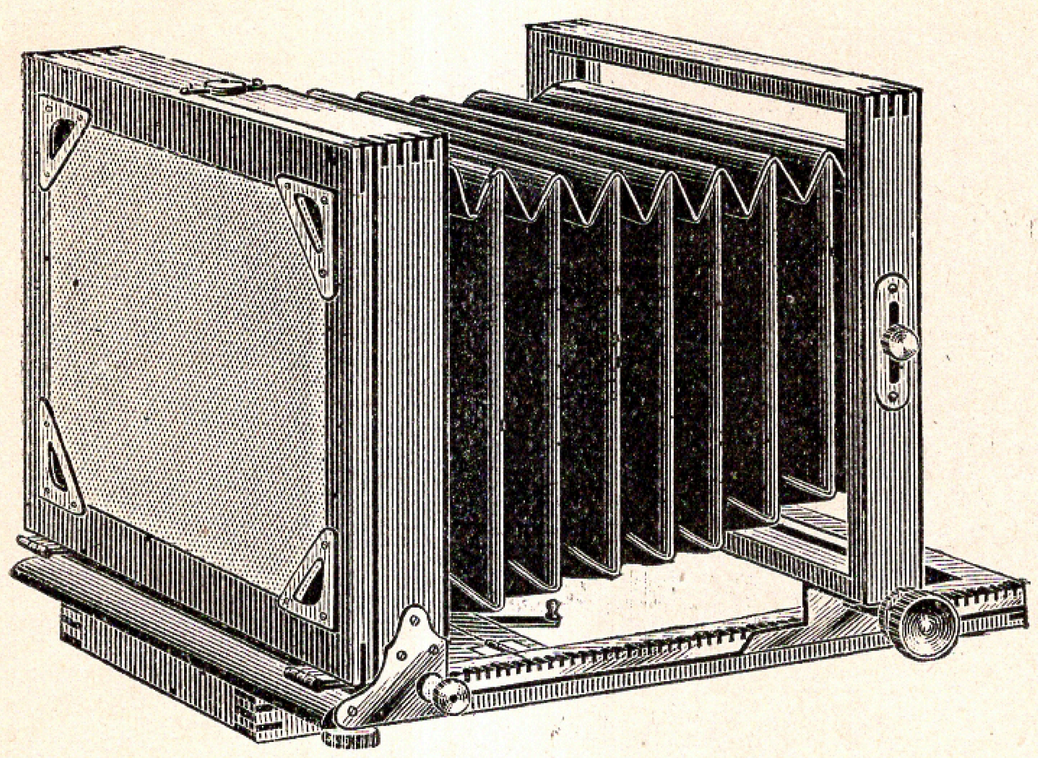


Fig. 1.

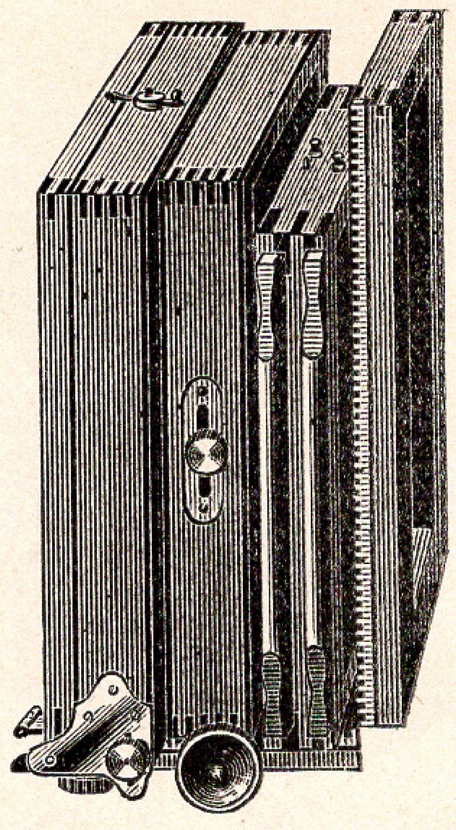


Fig. 2.

The Peerless Camera is a very popular camera; it is made in the same excellent manner that characterizes all our work and is first-class in all its appointments, we having spared no pains to make it one of the most desirable cameras in market.

It is made with forward focus, the guide brackets working in the groove in the side of the metal rack. The bellows are slightly coned, leaving the front wide enough for stereoscopic work.

The same method of applying the horizontal swing is used as on Ideal, adding no bulk or weight.

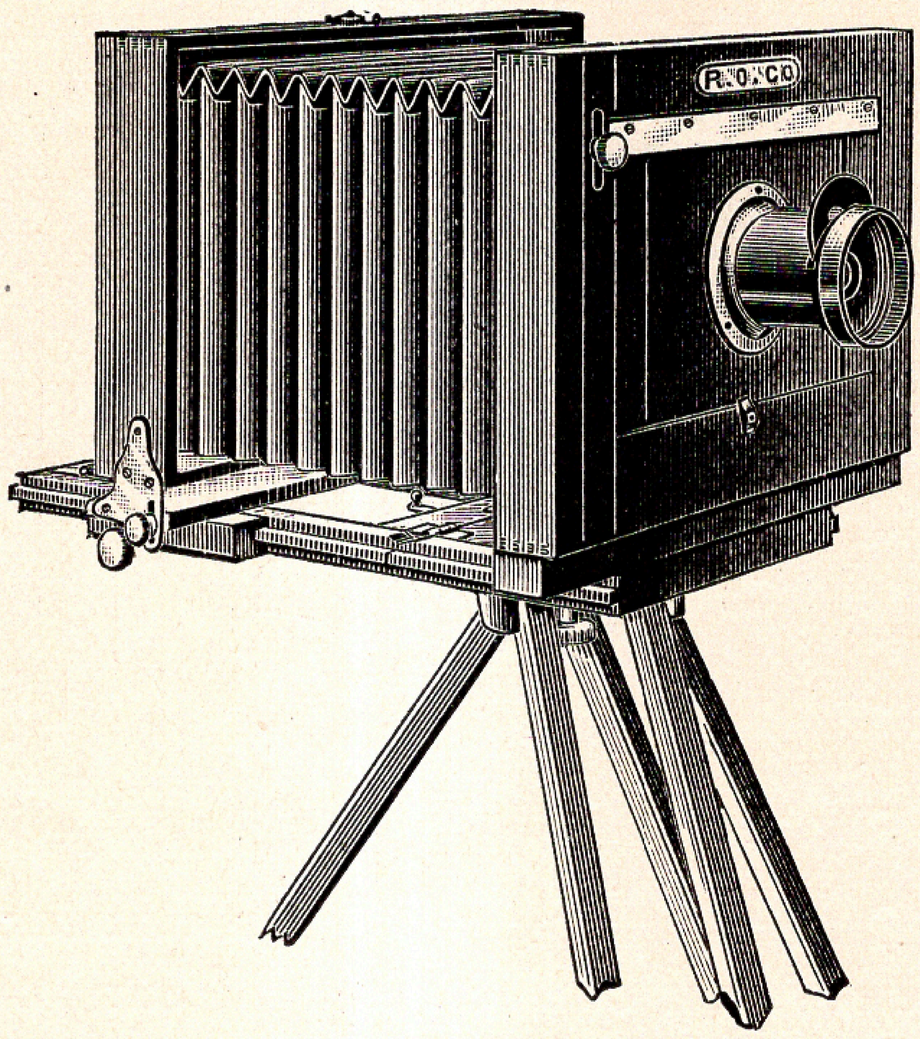
It is made of Honduras mahogany, highly polished, with nickel trimmings; it has sliding front, folding bed, rack and pinion, and is easily reversed, by means of our new adjustable reversing clamp; the same device for holding folding part of bed rigid is used as on the New Model.

Price includes R. O. Co.'s Single View Lens, Carlton Sliding Tripod, Canvas Carrying Case, and one Perfection Plate-holder (except 8 x 10, where neither lens nor tripod are included).

SIZE OF VIEW.	SINGLE SWING.	DOUBLE SWING.
3¼ x 4¼	$16 00	$18 00
4 x 5	17 00	19 00
4¼ x 6½	18 00	20 00
5 x 7	20 00	22 00
5 x 8	22 00	24 00
6½ x 8½	25 00	27 00
8 x 10	*24 00	*26 00

*Not including lens or tripod.

NEW MODEL.



The New Model Camera is well known, it having been on the market for six years, and its popularity attests its merits. This camera shares with the New Model Improved the reputation of being the most popular camera in market for amateurs' use.

It is very light and compact, making a very desirable camera for the amateur who desires a good but cheap outfit.

It is made of selected cherry, highly finished, and with nickel trimmings. It is provided with sliding front, folding bed, and is easily reversed for upright pictures by our new adjustable reversing clamp, by which means the strain is entirely on the bed where it belongs.

The folding part of bed is held rigid by our new clamp-hook, the quickest, easiest, and most effective device yet used for the purpose.

Price includes R. O. Co.'s Single View Lens, Standard Folding Tripod, Carrying Case, and one Perfection Plate-holder, (except 8 x 10, where neither lens nor tripod are included).

SIZE OF VIEW.	WITHOUT SWING.	SINGLE SWING.
3¼ x 4¼	$ 9 00	$10 00
4 x 5	9 00	10 00
4¼ x 6½	10 00	11 00
5 x 7	11 00	12 00
5 x 8	11 00	12 00
6½ x 8½	13 00	15 00
8 x 10	*15 00	*17 00

*Not including lens or tripod.

NEW MODEL IMPROVED.

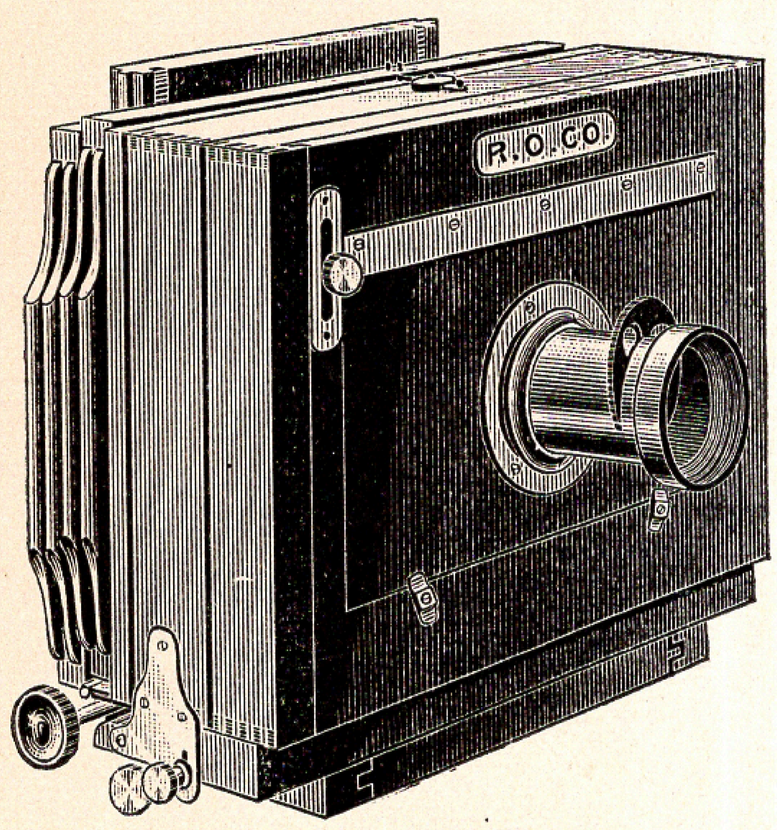


Fig. 1.

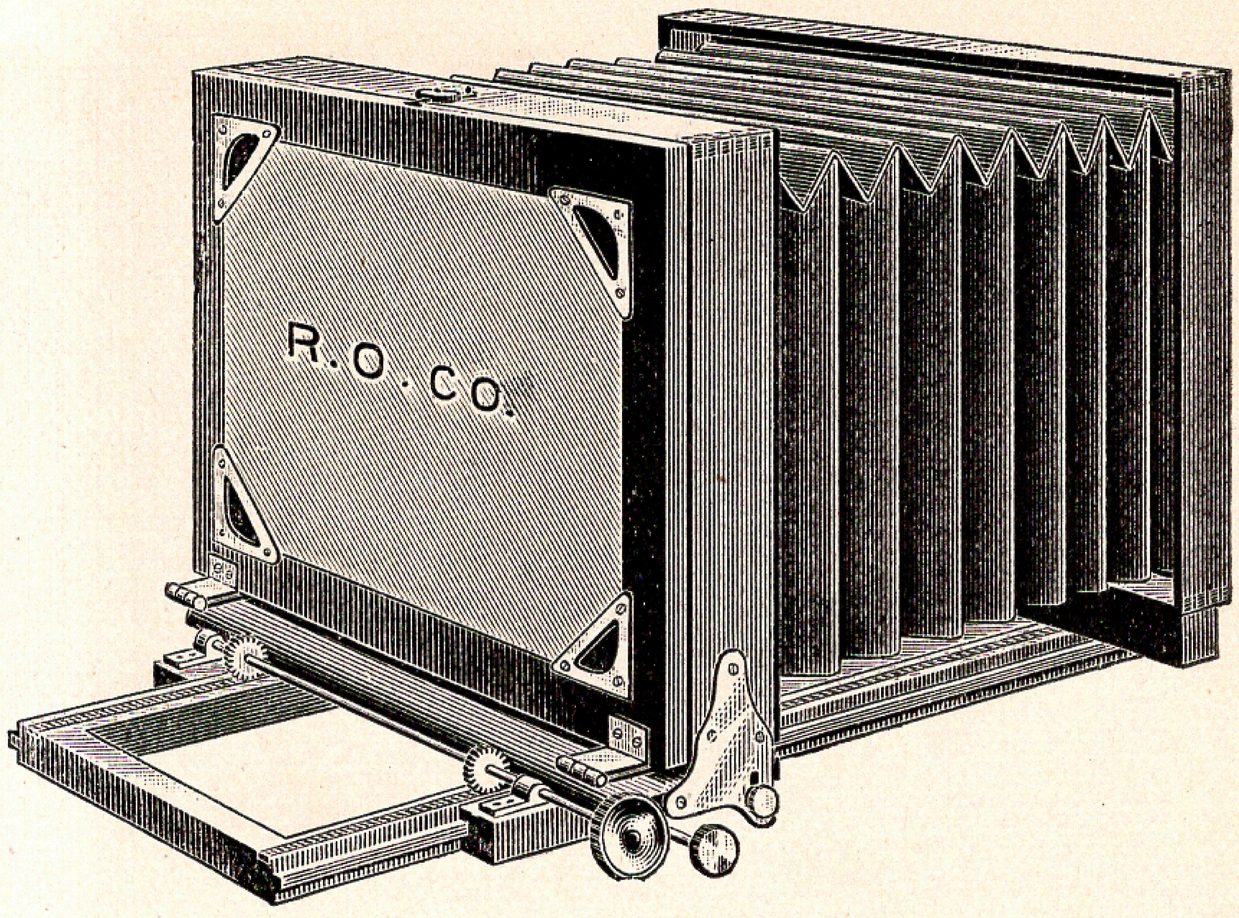


Fig. 2.

The New Model Improved is made after the general style of the New Model. It has enjoyed the reputation for the past five years of being the most popular camera in market, and deservedly so, it being the only strictly first-class camera made at a price within the reach of the ordinary amateur, and is conceded to be the best camera for the price to be found in market.

It is very light and compact, which, together with its handsome appearance, makes it a very desirable camera for those who desire a good camera but do not care to invest in a high priced outfit.

It is made of the best Honduras mahogany, highly polished, with nickel trimmings; it has sliding front, folding bed, and is reversible by means of our new adjustable reversing clamp.

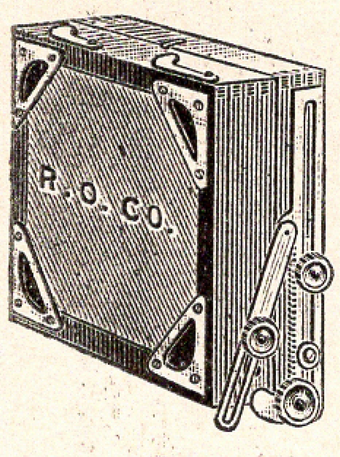
It has rack and pinion focusing movement; the folding part of bed is held rigid by our new clamp hook, the quickest, easiest and best device yet used for the purpose.

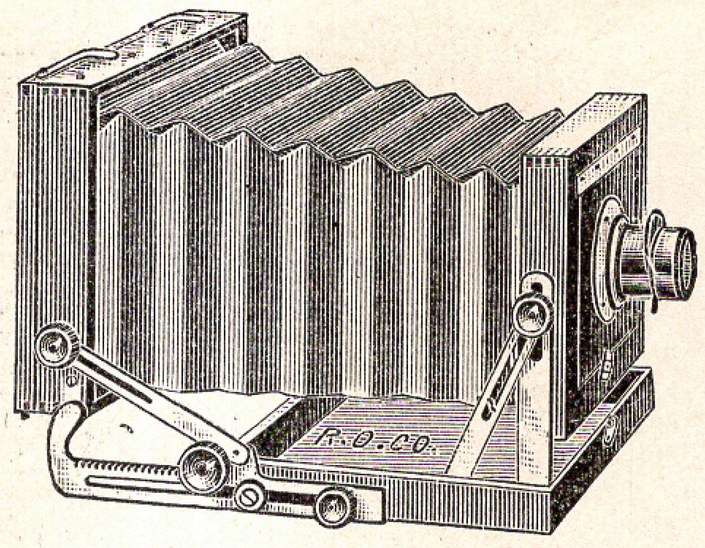
Price, including R. O. Co.'s Single View Lens, Carlton Sliding Tripod, Carrying Case and one Perfection Plate-holder (except 8 x 10, where neither lens nor tripod are included):—

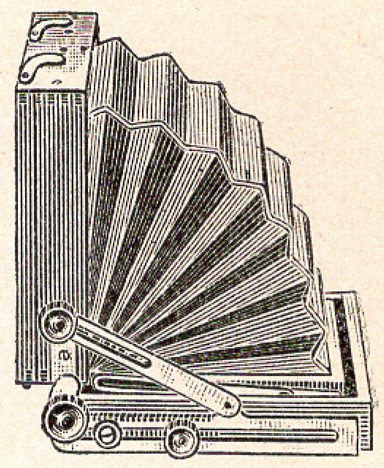
SIZE OF VIEW.	SINGLE SWING.	DOUBLE SWING.
3¼ x 4¼	$13 00	$15 00
4 x 5	14 00	16 00
4¼ x 6½	16 00	18 00
5 x 7	18 00	20 00
5 x 8	18 00	20 00
6½ x 8½	22 00	24 00
8 x 10	*20 00	*22 00

*Not including lens or tripod.

MIDGET POCKET CAMERA.

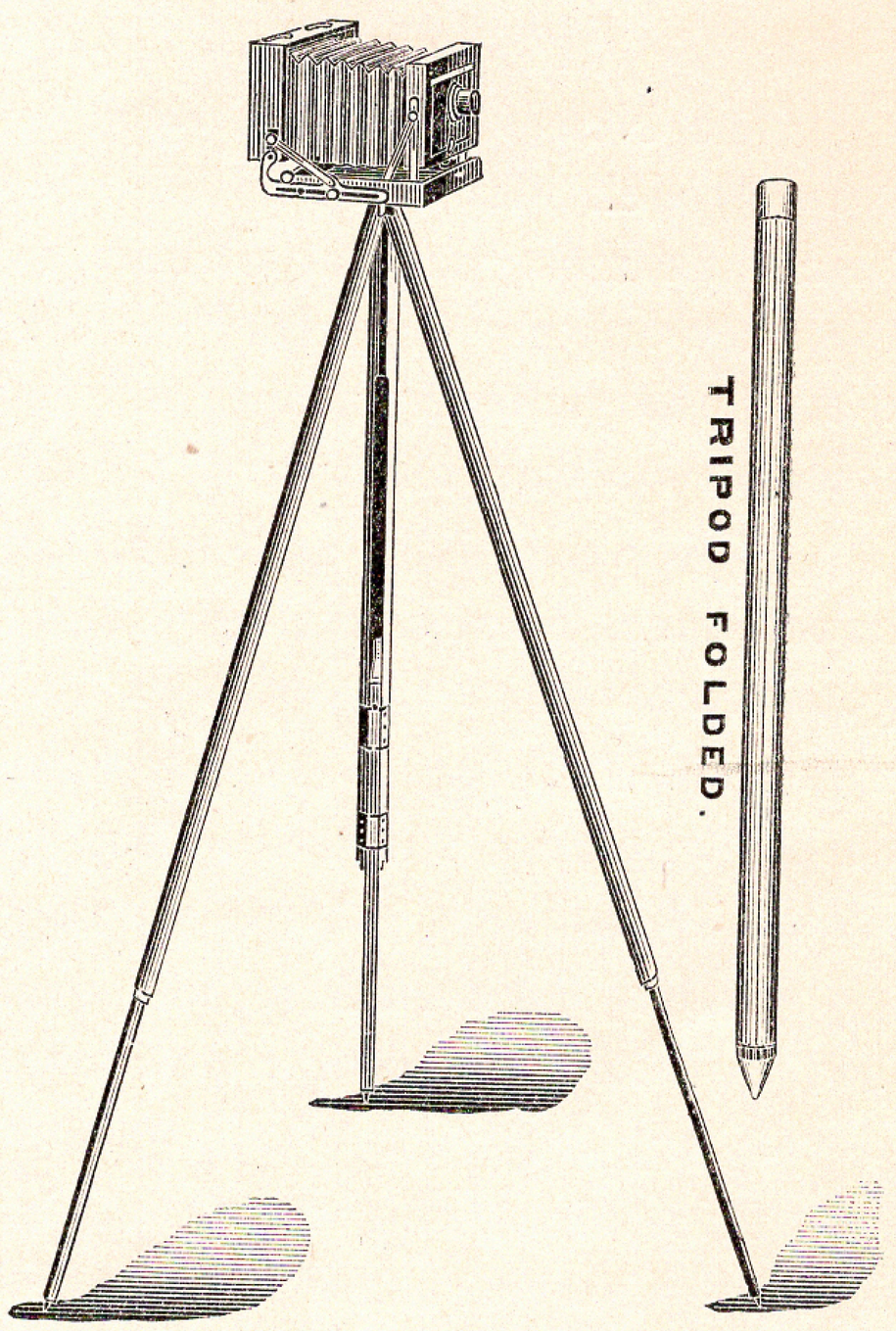






The Midget Pocket Camera is the most compact camera ever made, it being but 1½ inches thick when folded, and the 3¼ x 4¼ can be carried in an ordinary coat pocket, while the 4 x 5 can be carried in an overcoat pocket. On account of its compactness it is invaluable for ladies, tourists, bicyclists and canoeists.

While so very compact, yet the 3¼ x 4¼ camera has a focal length of 6½ inches, while the 4 x 5 has 7½ inches, so that any lens can be used if desired.



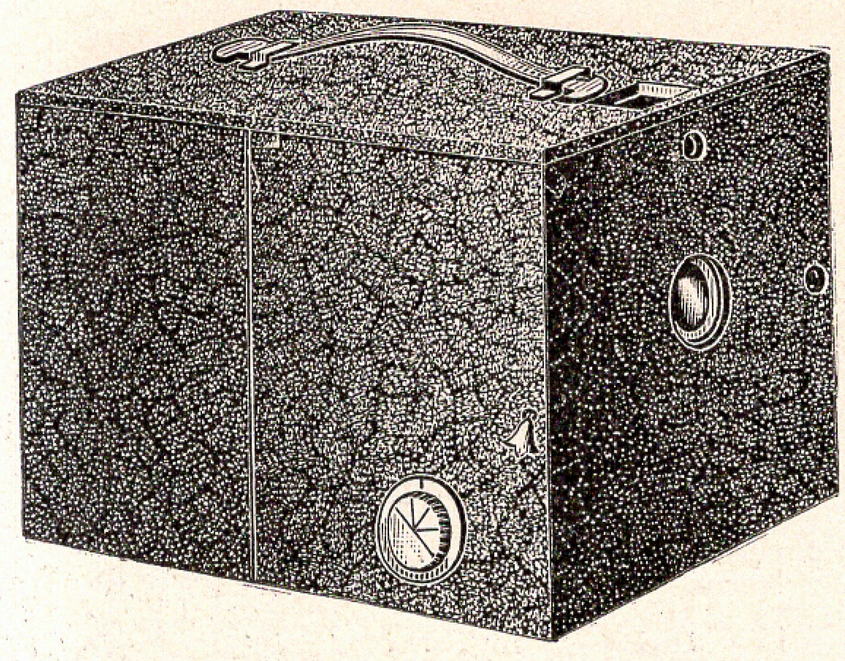
The Midget Pocket Camera is made in the best possible manner, being made of selected mahogany, highly polished, with metal work of polished and lacquered brass.

It has rising front, vertical swing and has fine rack and pinion focusing movement; the ground glass is spring-acting, the holder sliding between it and the camera box.

The Lens is a Rapid Rectilinear Lens of great depth of focus and flatness of field, giving brilliant definition, and will cover the plate to the extreme corners, even with shutter; the lens is made compact enough to remain attached to the lens board and be reversed in the camera when the camera is folded.

The lens is provided with rotating diaphragms and Rotating Diaphragm Shutter for instantaneous views; this Shutter is a novel device and very simple, and at the same time is very compact, as it occupies no more room than the rotating diaphragm.

MIDGET POCKET CAMERA.



AS A DETECTIVE CAMERA.

The Tripod is an ingenious invention, it having the appearance of a cane when folded, and is very convenient, being simply an extension tripod, each leg being one-third of a circle outside.

The size of the 3¼ x 4¼ when folded is 4 x 5 x 1½ inches, and weighs less than one pound.

In addition to its use as a very compact View Camera, we make the Midget into a Hand or Detective Camera by enclosing it in a neat leather-covered box capable of carrying six holders with the camera.

The box is provided with a separate rack and pinion for focusing, the milled head being graduated for distances.

The change from a View Camera to a Detective Camera, or *vice versa*, is made in fifteen seconds.

The Midget is a Combination Camera of the highest order, and whether as a View or Detective Camera, it is not excelled.

We sell the Midget either complete or without the Detective features, as may be required.

Price includes Lens, Shutter, Tripod and three Holders.

3¼ x 4¼, - - - - -	$38 00
4 x 5, - - - - - -	40 00
4¼ x 6½, - - - - -	45 00
5 x 7, - - - - - -	50 00

If the Detective Camera feature is not desired, deduct $10.00.

HOLDERS.

3¼ x 4¼ - - -	$1 25	4¼ x 6½ - - -	$1 50
4 x 5 - - -	1 25	5 x 7 - - -	1 50

THE PREMIER.

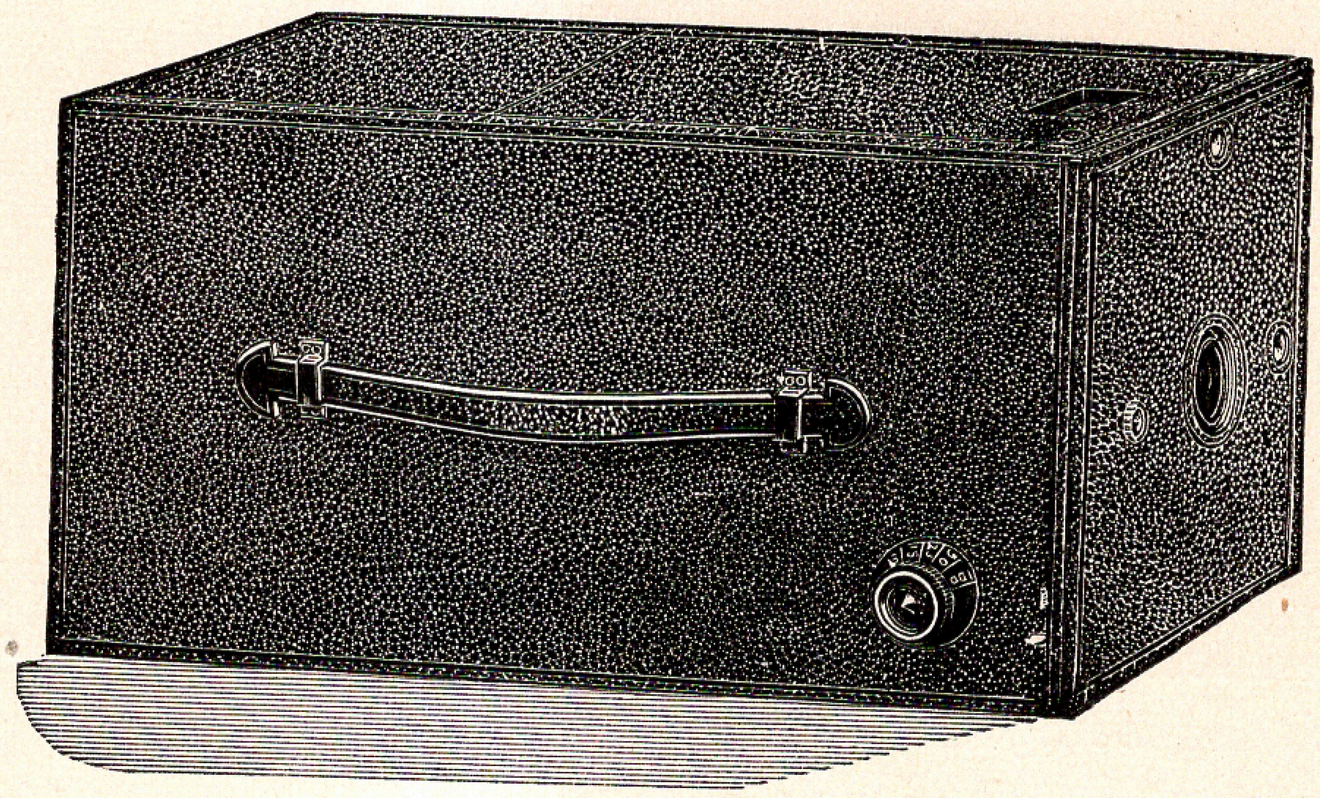


Fig. 1.

The Premier is conceded to be the best Hand Camera in market for any where near the price, and possesses some advantages over all others.

The Shutter is a novel device and is so constructed that it revolves in one direction only, not requiring to be set and only requires to be wound up to be always ready; it will make six exposures without rewinding. The repeating shutter is of especial advantage in using a Roll Holder and Films as no safety device is required to cover the Lens, while setting the shutter, as in most other detective cameras.

Time exposures are made by simply pressing downward on the small brass lever near the press-button, and when the required time is given an upward movement of the lever will close the shutter.

Time exposures can also be made with the cap if preferred, by lowering the front of camera, as in Figure 2.

The Focusing Scale at side of the Premier is accurately marked with white figures on a black ground.

The Premier has ground glass the full size of plate, and can be used as a regular View Camera, as there is a removable panel at the back, which allows the ground glass to be seen while focusing.

THE PREMIER.

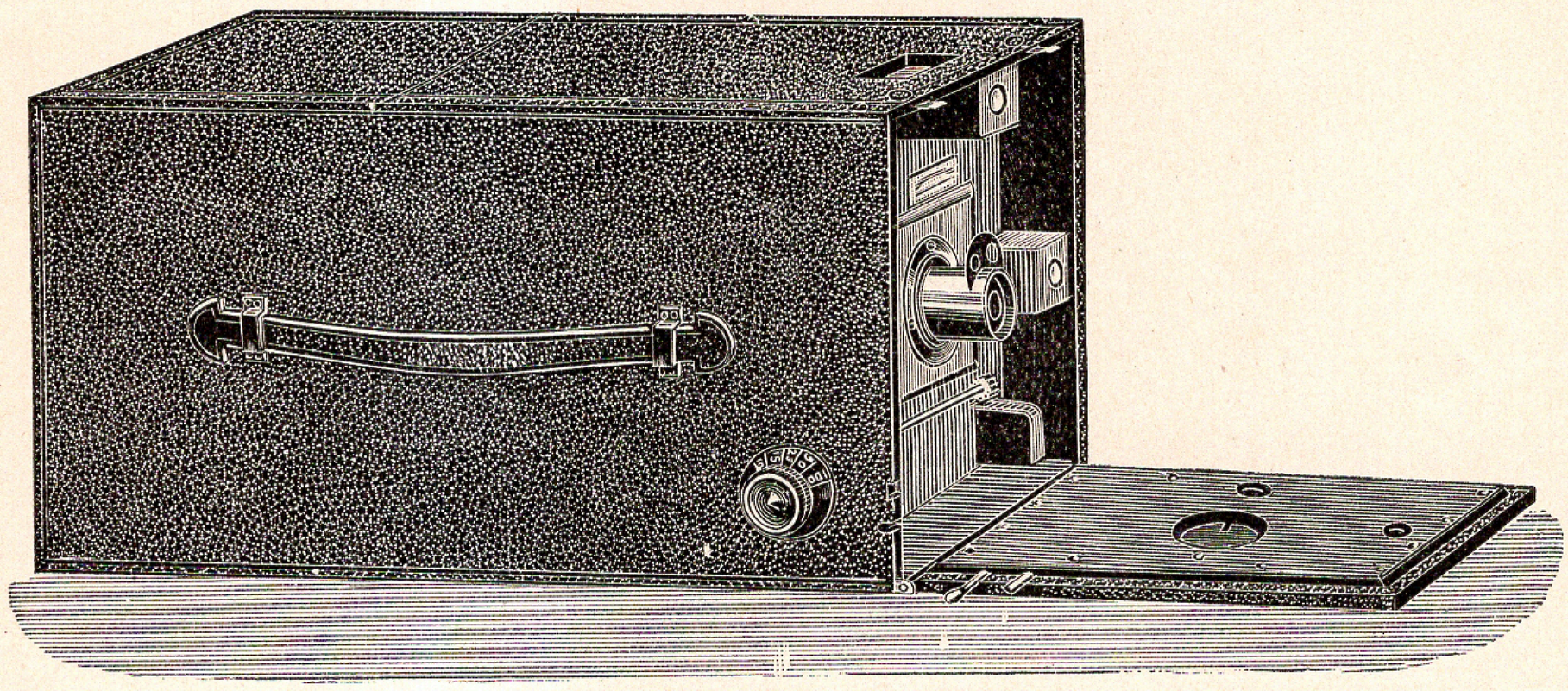


Fig. 2.

The Premier has two view finders and also two plates for tripod screw, for both horizontal and vertical views.

The Premier is covered with black seal grain leather, and has a leather handle for carrying, making a very handsome instrument.

The Lens is our well known R. O. Co. Single View Lens, with revolving diaphragms, and the camera is so made that any other lens may be substituted if desired.

With the Premier either glass plates or films can be used, or both, as the Plate-Holders and Roll-Holder are interchangeable.

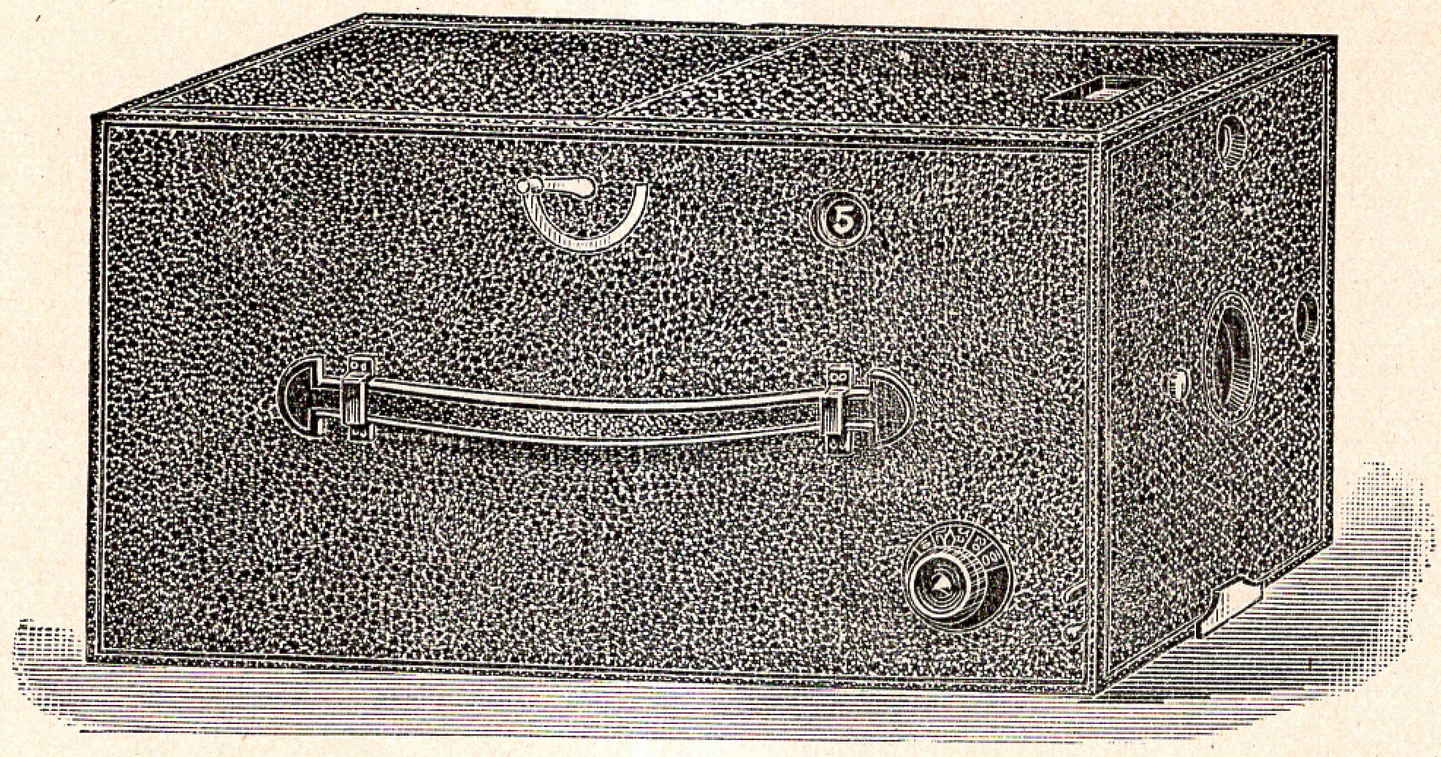
The Premier is made for holding both four and six Perfection Holders, the difference in length being 1½ inches.

The size of the 4 x 5 Premier is only 6¼ x 6¾ x 11 inches, and weighs less than four pounds.

PRICE.

	4 x 5	5 x 7
Complete, with one Holder, - -	$18 00	$25 00
Extra Perfection Holders, - - -	1 00	1 25
Film Holders, - - - -	1 25	1 50
Roll Holder, loaded for 48 exposures, -	14 00	20 00
For Rapid Rectilinear Lens instead of Single View Lens, add - - - -	6 00	10 00

ROCHESTER MAGAZINE CAMERA.



The Rochester Magazine Camera is what has long been wanted; a thoroughly practical Magazine Camera for plates or films.

This camera is exceedingly simple of manipulation, as but two movements are required to change the plate.

The exposed plate is removed from its position and placed back of the others, so that when all have been exposed the plates are in the same position as before any exposures were made.

The Rochester Magazine Camera is capable of carrying twelve plates or films, as may be desired, or the camera may be loaded partly with plates and partly with films.

It is not necessary that the camera be completely filled, as it will work equally well if but one plate is in the camera.

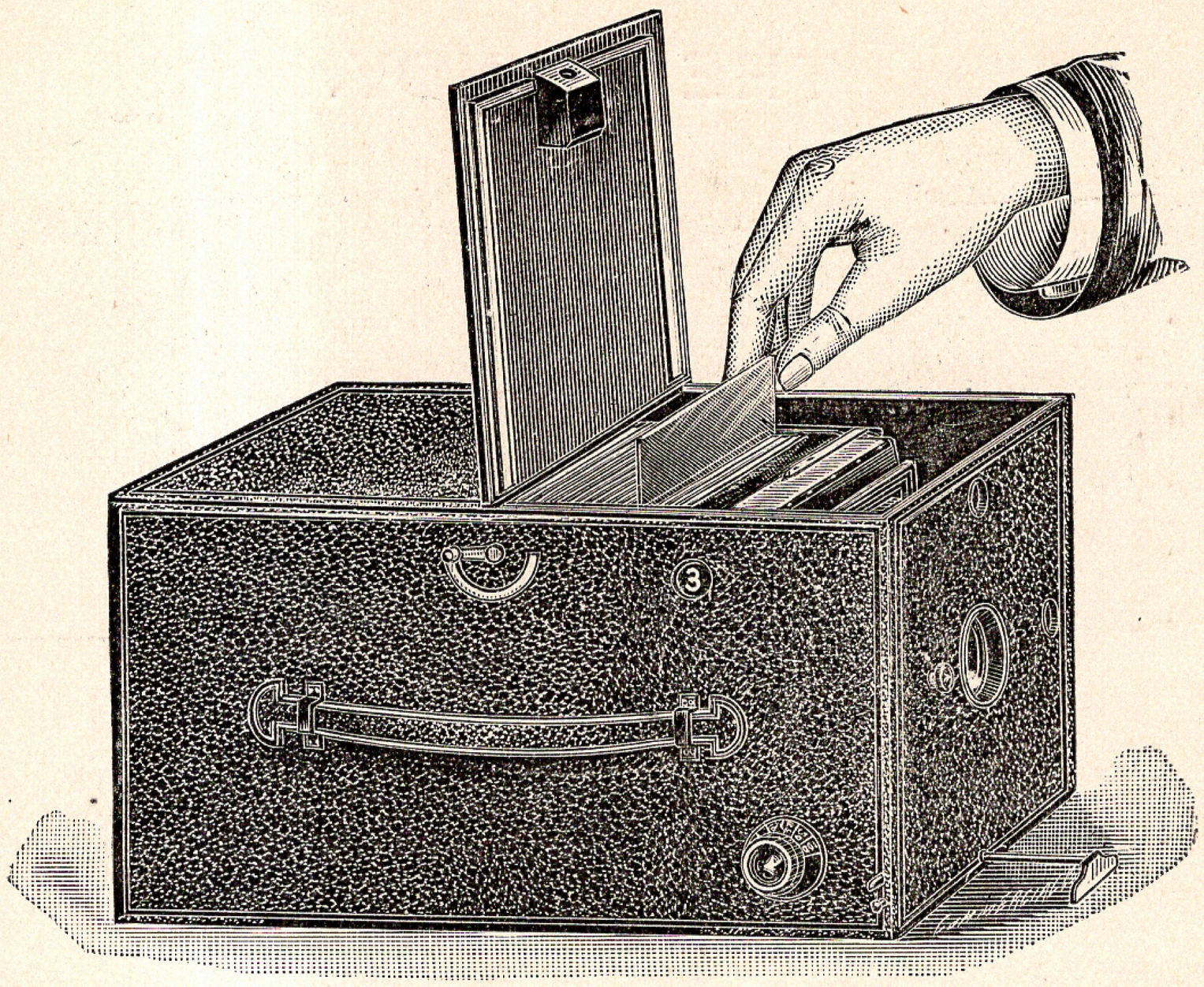
After exposing one or more plates they may be removed from the camera for development, without waiting to expose the entire number.

The camera is provided with a Rapid Rectilinear Lens of guaranteed quality, every lens being thoroughly tested, the image on the ground glass being examined under a magnifying glass while gauging the Focusing Scale, and at least two negatives made with each camera.

The camera has an excellent shutter, which can be used for both instantaneous and time exposures, and the lens is always covered when setting the shutter.

Two finders are provided, for horizontal and vertical views, and two screw plates for tripod also.

ROCHESTER MAGAZINE CAMERA.



The Focusing Scale, at the side of camera, is plainly marked with white figures on a black ground, and is accurately gauged.

The camera is furnished with an automatic tally which shows how many exposures have been made, it being numbered from one to twelve inclusive.

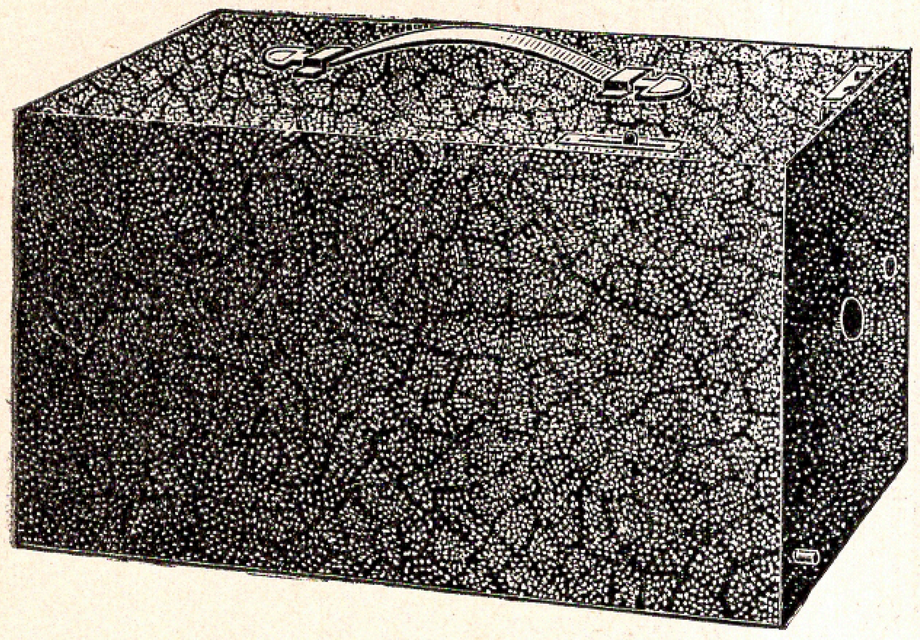
The camera is covered with black seal grain leather, and with a leather handle for carrying, making an exceedingly handsome instrument.

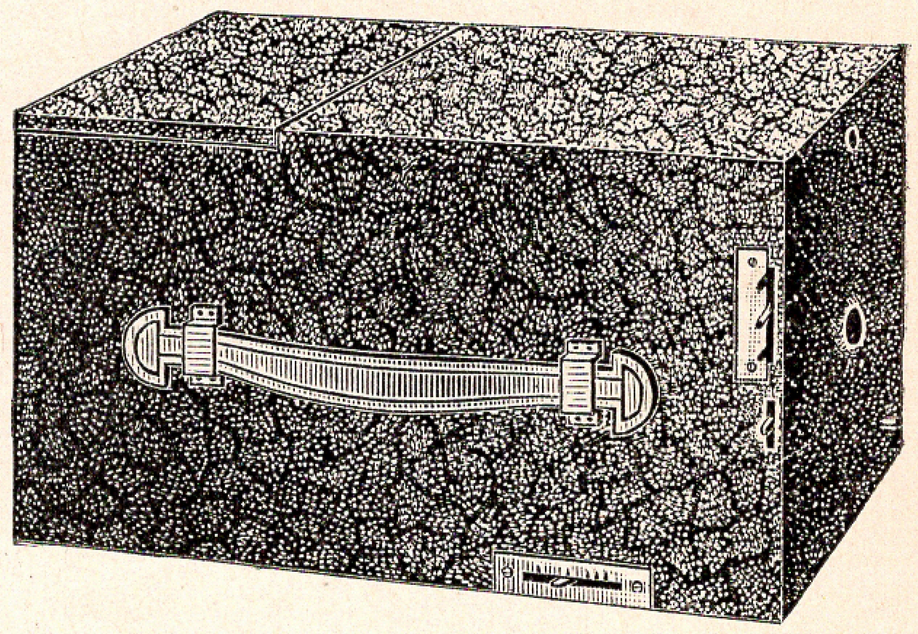
The sixe of plates used is 4 x 5, and the camera measures only $6\frac{1}{4}$ x $6\frac{3}{4}$ x 13 inches.

The carriers for plates and films differ slightly, and the camera will be fitted for either, though, unless specified, the carriers for plates will be furnished with the camera. By purchasing a dozen film carriers, the camera will then be adapted to both plates and films.

Price, - - - - - - - -	$35 00
Carriers, per dozen, - - - -	3 00

THE HANDY.





The Handy is an excellent instrument, though at a low price, and is made for those who desire a cheap camera, not caring for some of the advantages of the Premier.

The Handy is provided with an excellent shutter, which can be regulated for speed. The Handy is focused by a lever at side, the slot being marked for distances.

The Lens is our well-known R. O. Co. Single View Lens; no other lens can be fitted to the Handy.

The dimensions of the Handy are $6\frac{1}{4}$ x $6\frac{3}{4}$ x 11, and will hold four holders. The Handy has two view finders for making either horizontal or vertical views.

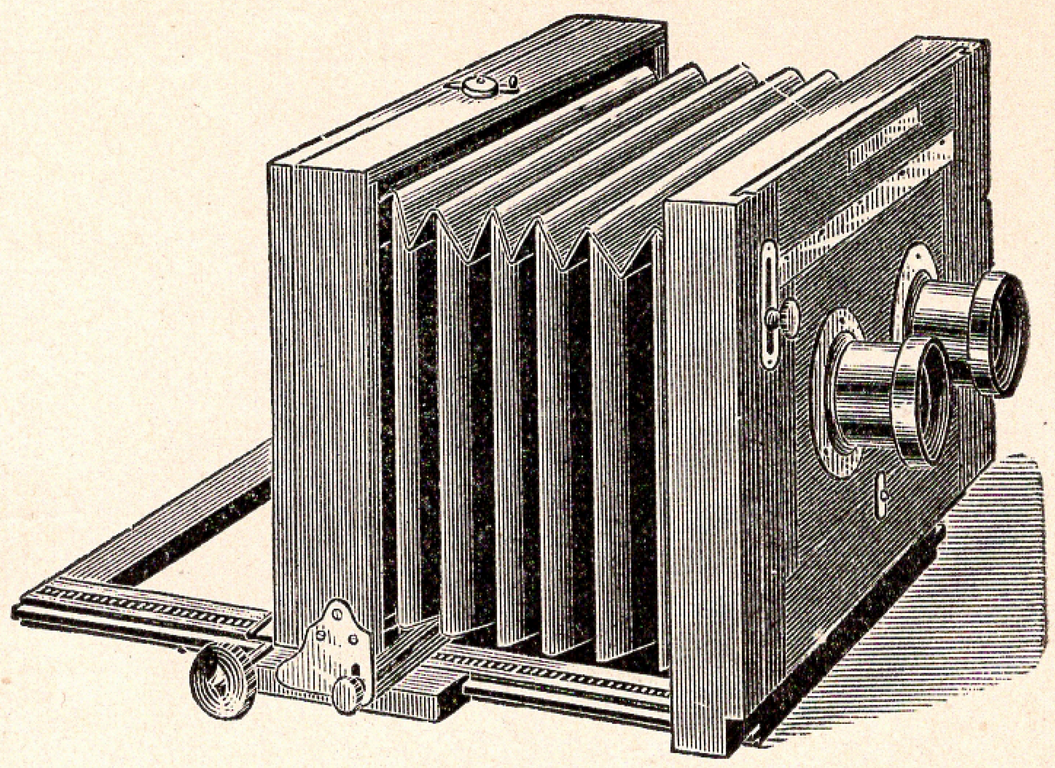
The Handy is covered with black seal grain leather, and with a leather handle for carrying, and is a very handsome instrument.

Either glass plates, cut films or roll of films can be used, as the plate-holder, film-holder and roll-holder are interchangeable.

Price Complete, 4 x 5, - - -	$10 00
Extra Perfection Holders, - - -	1 00

NEW MODEL STEREOSCOPIC CAMERA.

This is the lightest, most compact and simplest Stereoscopic camera yet placed on the market, combining all those most desirable features essential in a Stereo-camera.



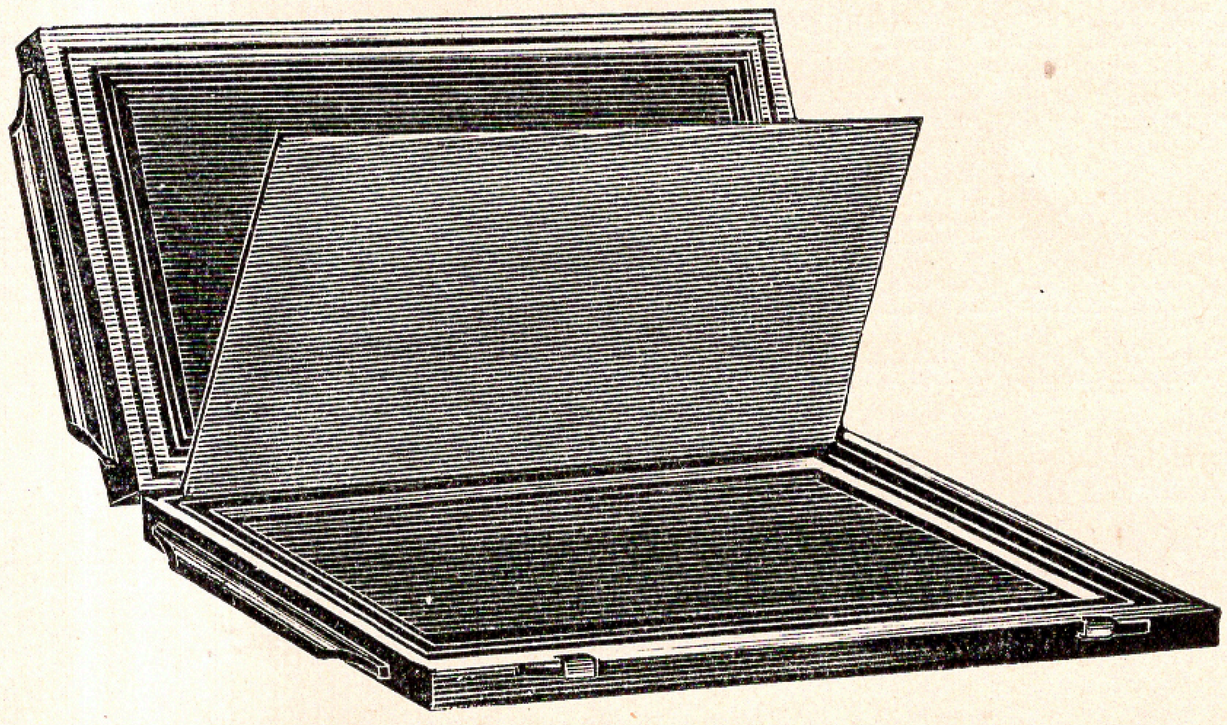
It is made with no loose parts. It has sliding front, single swing, folding bed, rack and pinion focusing movement, sliding tripod, and canvas carrying case.

It is made from best mahogany, highly finished, with nickel trimmings.

Price, for 5 x 8 complete, including one Perfection Holder and pair of No. 1 R. O. Co. single view lenses, matched, $25 00
Complete without lenses, - - - - 18 00
" " " or tripod, - - - 15 00

ENGLISH BOOK HOLDER.

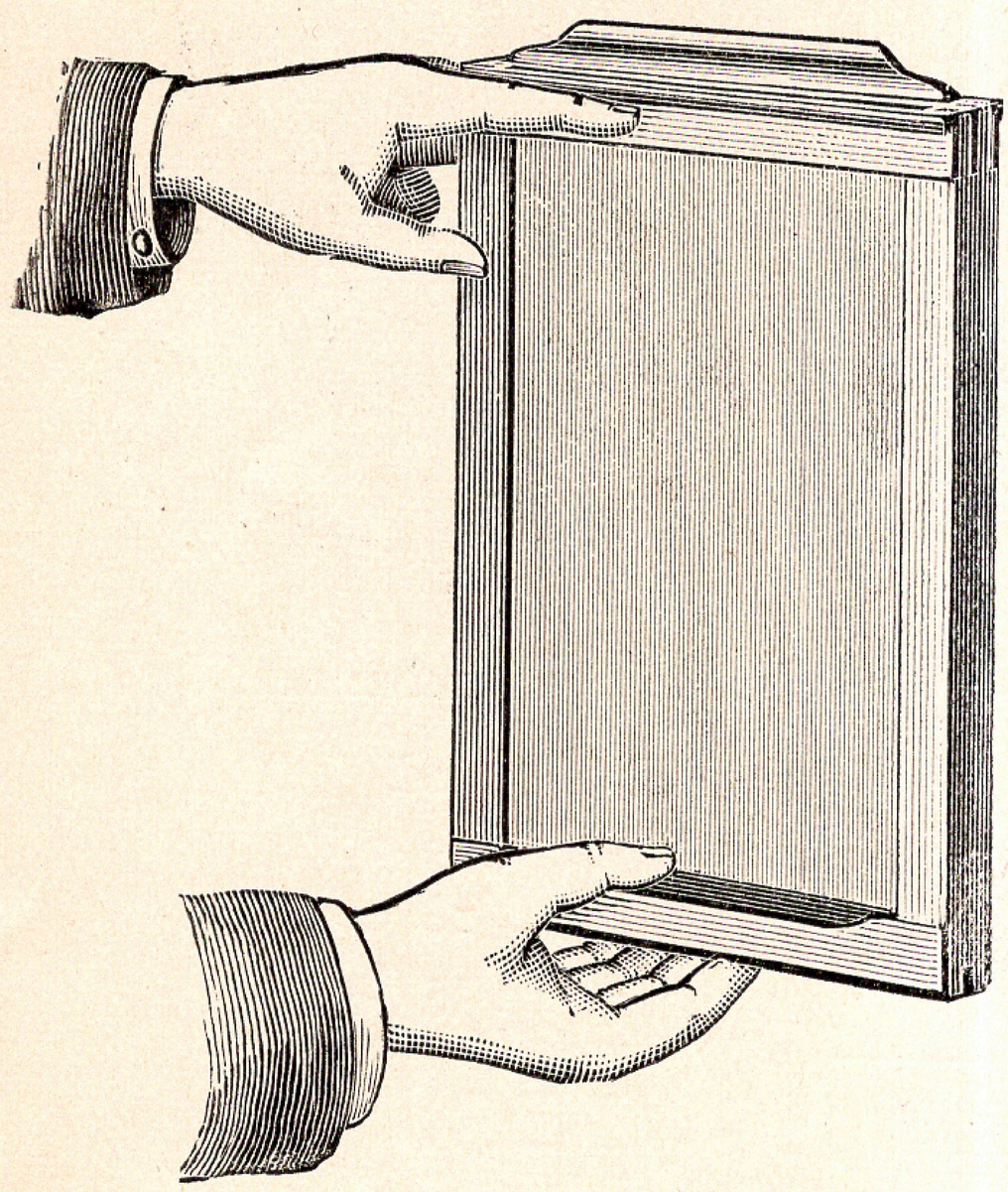
EXTRA THIN.

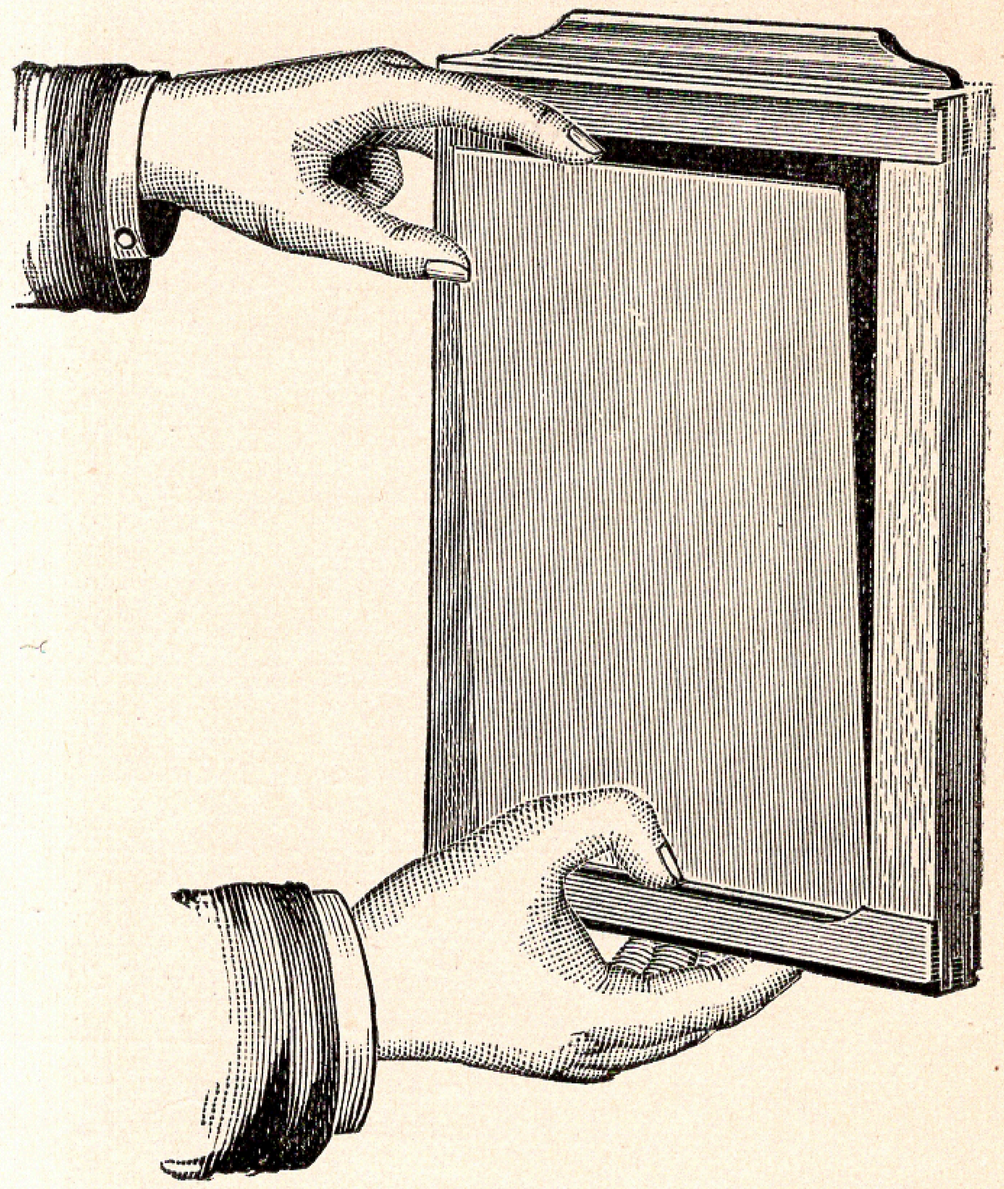


This is the regular English form of holder, and it has many advantages; the two sides are hinged, and open like a book when placing or displacing the plates; the septum, for division between the two sides of holder, is also hinged, and no trouble to put in place in the dark-room.

3¼ x 4¼,	$1 60	8 x 10,	$3 00
4 x 5,	1 60	10 x 12,	4 50
4¼ x 6½,	1 75	11 x 14,	6 00
5 x 7,	1 85	14 x 17,	7 50
5 x 8,	2 00	17 x 20,	10 00
6½ x 8½,	2 25	18 x 22,	15 00

PERFECTION HOLDER.





The Perfection Double Plate-holder is the simplest and best plate-holder ever placed on the market; it is simply *perfection.*

To load the Perfection Holder, the end of the plate is rested against the spring-bar at the end of the Holder, then by simply pressing the spring-bar with the thumb, the plate falls into place.

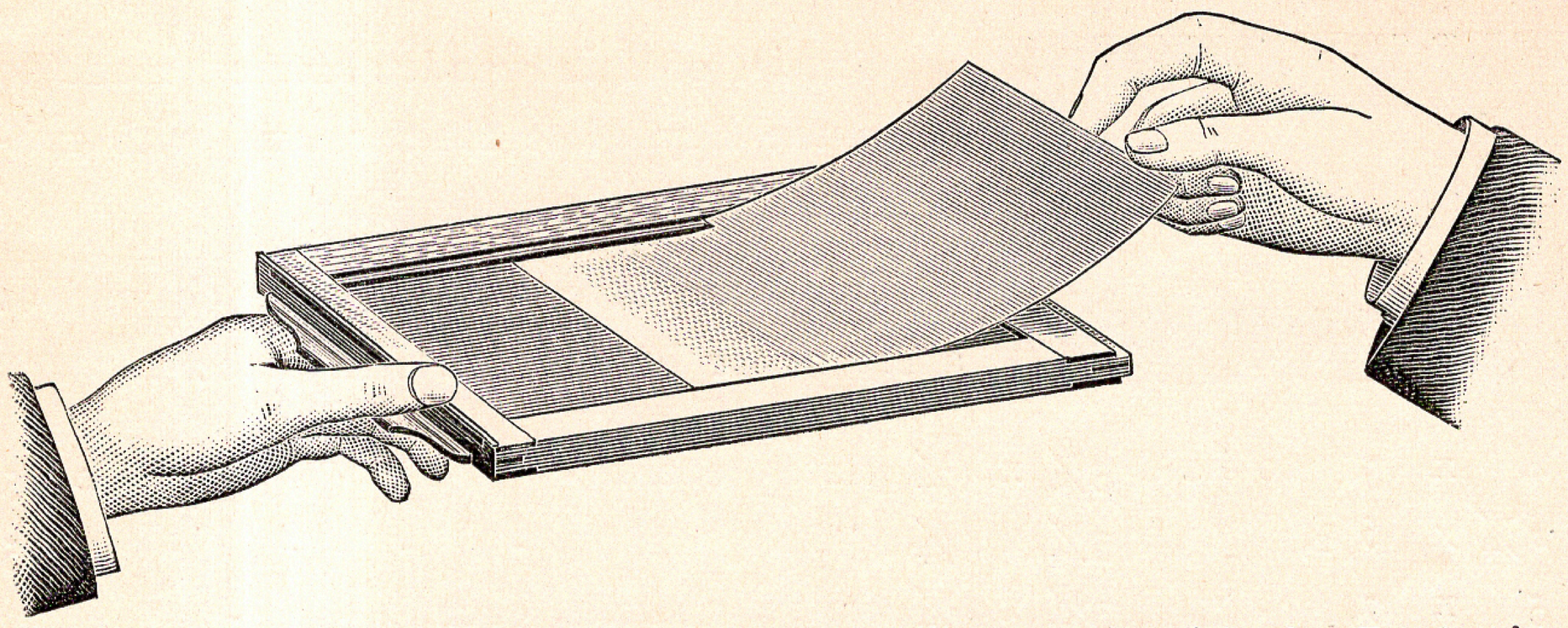
To unload the Perfection Holder, hold it as illustrated in Figure 1 and by pressing on the spring-bar the plate will fall forward, the edge resting against the fingers as illustrated in Figure 2.

On account of its simplicity the Perfection Holder can be loaded and unloaded with the greatest of ease, even in absolute darkness.

As the plate is held in place by the ends only, the *full width* of the plate is exposed and but 1-16 inch is cut off from each end.

3¼	x 4¼	$1 00	6½	x 8½	$1 60
4	x 5	1 00	8	x 10	1 85
4¼	x 6½	1 25	10	x 12	3 00
5	x 7	1 25	11	x 14	4 50
5	x 8	1 35			

THE FACILE FILM HOLDER.



The Facile Film Holder is made interchangeable with the Perfection Plate Holder, so either may be used on the same camera.

The Facile Film Holder is very simple to load and unload, and we believe it to be the best film holder in market.

3¼	x 4¼,	$1 25	5	x 8,	$1 60
4	x 5,	1 25	6½	x 8½,	1 85
4¼	x 6½,	1 40	8	x 10,	2 20
5	x 7.	1 50			

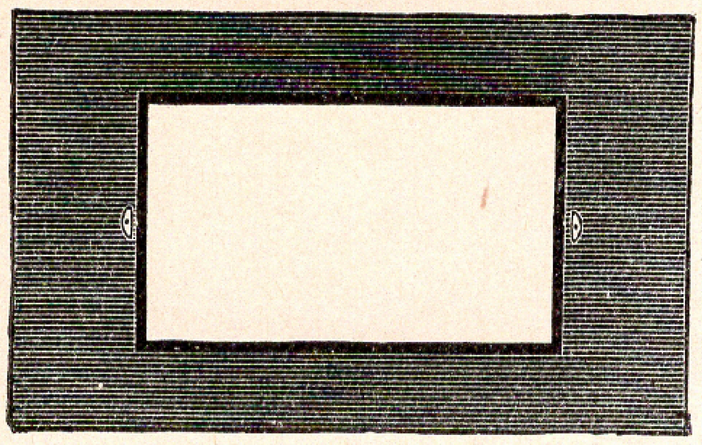
MAHOGANY HOLDERS.

We make both Perfection Plate Holders and Film Holders of mahogany, polished, and with rubber slides as a few of our customers who buy the Universal Camera desire the Plate Holders to correspond in appearance to the camera.

As it is purely a matter of satisfaction, we cannot consistently ask our customers to buy these instead of the regular kind, for while they are very handsome, they are not in quality, any better, in fact we were urged to make them in this manner by some of our customers.

PERFECTION HOLDERS.		FILM HOLDERS.	
3¼ x 4¼ - - -	$1 50	3¼ x 4¼ - - -	$1 75
4 x 5 - - -	1 50	4 x 5 - - - -	1 75
4¼ x 6½ - - - -	1 90	4¼ x 6½ - - -	2 00
5 x 7 - - -	2 00	5 x 7 - - - -	2 15
5 x 8 - - - -	2 00	5 x 8 - - -	2 25
6½ x 8½ - - -	2 40	6½ x 8½ - - -	2 75
8 x 10 - - -	2 85	8 x 10 - - -	3 25
10 x 12 - - -	4 50		
11 x 14 - - -	6 00		

INSIDE KITS.

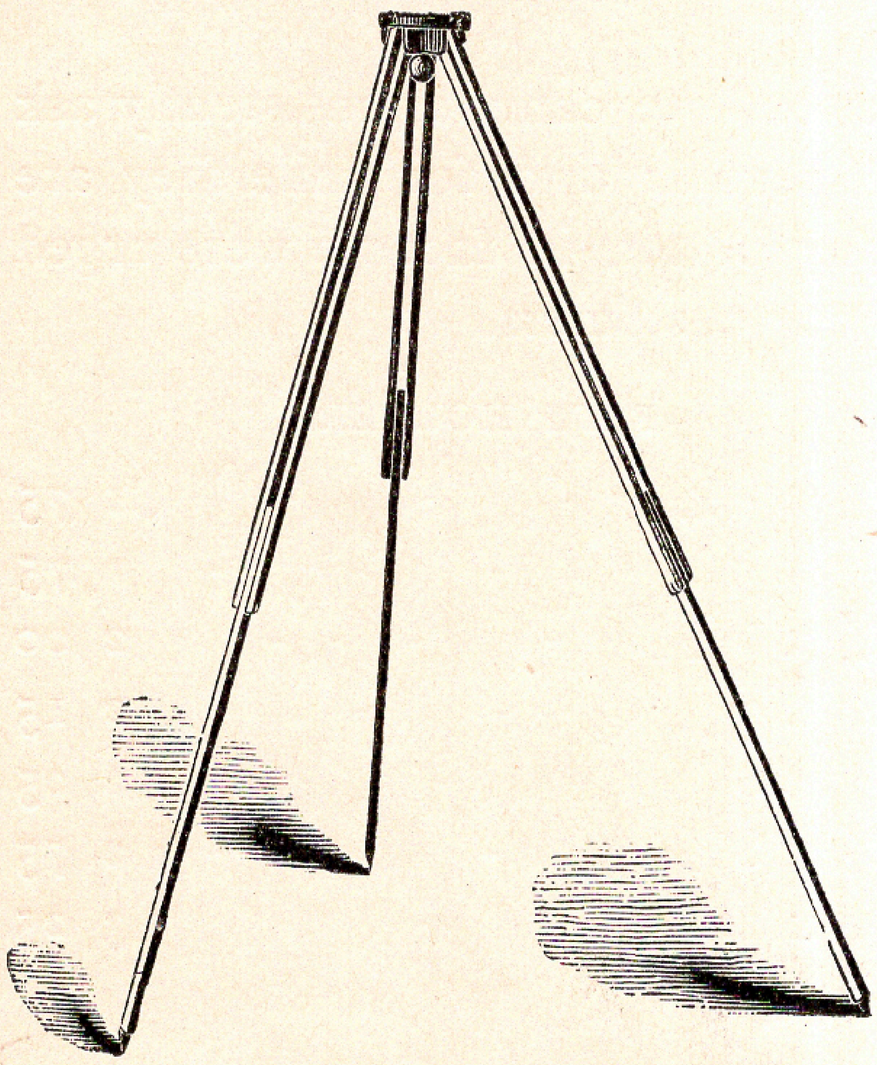


Consist of thin wooden frames, made to fit in the Dry Plate Holder, and with rabbets for holding smaller plate.

Our Kits have buttons at each end of aperture for holding plate in place.

4	x 5,	to hold	3¼ x 4¼ plates, each, - - - -	$0 25
4¼	x 6½,	"	3¼ x 4¼ " " - - - -	25
5	x 7,	"	3¼ x 4¼ or 4 x 5 plates, each, - -	30
5	x 8,	"	3¼ x 4¼, 4 x 5 or 4¼ x 6½ plates, each,	30
6½	x 8½,	"	4 x 5, 4¼ x 6½, 5 x 7, or 5 x 8 plates, each,	35
8	x 10,	"	4¼ x 6½, 5 x 7, 5 x 8, or 6½ x 8½ plates, each,	40
10	x 12,	"	5 x 7, 5 x 8, 6½ x 8½ or 8 x 10 " "	50
11	x 14,	"	8 x 10 or 10 x 12 plates, each, - -	60
14	x 17,	"	8 x 10, 10 x 12 or 11 x 14 plates, each, -	75
17	x 20,	"	11 x 14 or 14 x 17 plates, each, - -	1 00
18	x 22,	"	14 x 17 or 17 x 20 plates, each, - - -	1 50

TRIPODS.



Standard Folding Tripod.

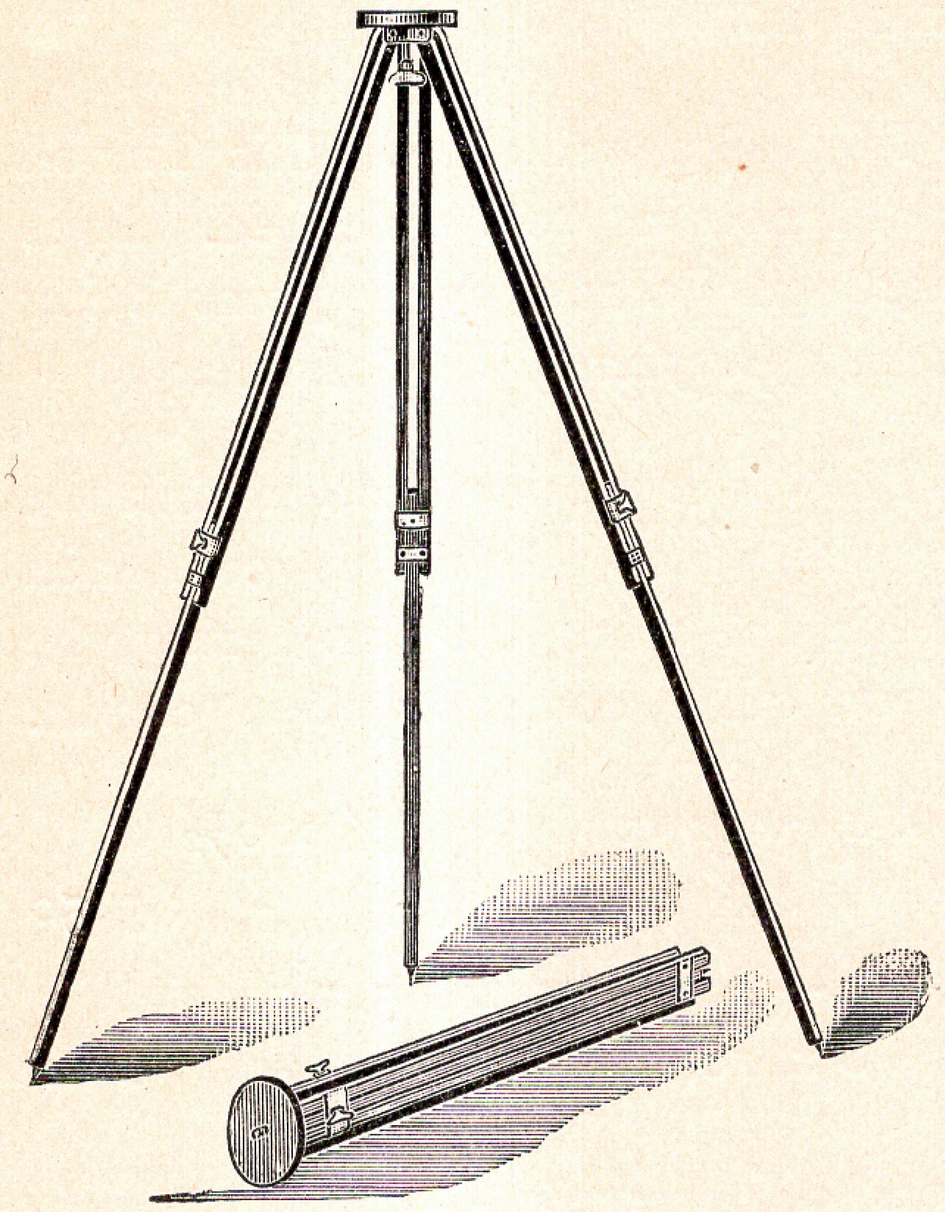
This is our original style of tripod, an extended description of which is hardly necessary.

It is light, strong and rigid.

The tripod screw remains always in the iron top, ready for use and not liable to loss.

Price, for cameras from 4 x 5 to 6½ x 8½, - - $2 00

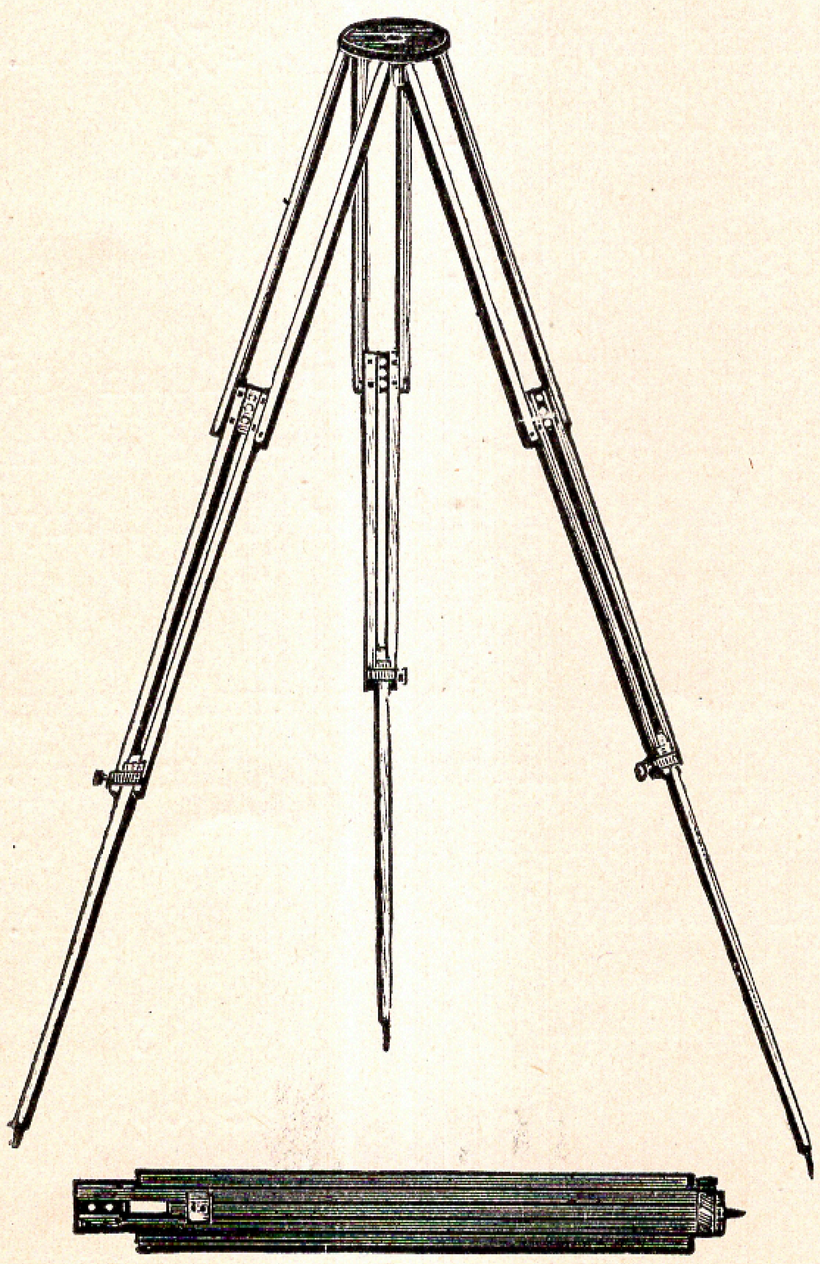
CARLTON'S SLIDING TRIPOD.



This is the simplest and best form of Sliding Tripod yet made. The legs are made in three pieces, same as the folding, which renders the tripod firmer when set up than where made of two pieces, which is the ordinary form. The tripod top is of wood, with cloth cover. The brass clamps each side of the leg have the ends turned toward each other, and when clamped, the pressure is exerted from all sides, rendering it the most rigid tripod in market. The special advantages of a sliding tripod over a folding one, are ease of leveling the camera in rough places by adjusting the length of tripod legs, and the quickness with which it is set up or taken down.

No. 1—For 3¼ x 4¼ to 4¼ x 6½ camera, -	$2 50
No. 2—For 5 x 8 and 6½ x 8½ camera, - -	3 00
No. 3—For 8 x 10 and 10 x 12 camera, - -	3 50
No. 4—For 11 x 14 and 14 x 17 camera, - -	4 50
No. 5—For 17 x 20 to 20 x 24 camera, - -	5 50

COMBINATION TRIPOD.



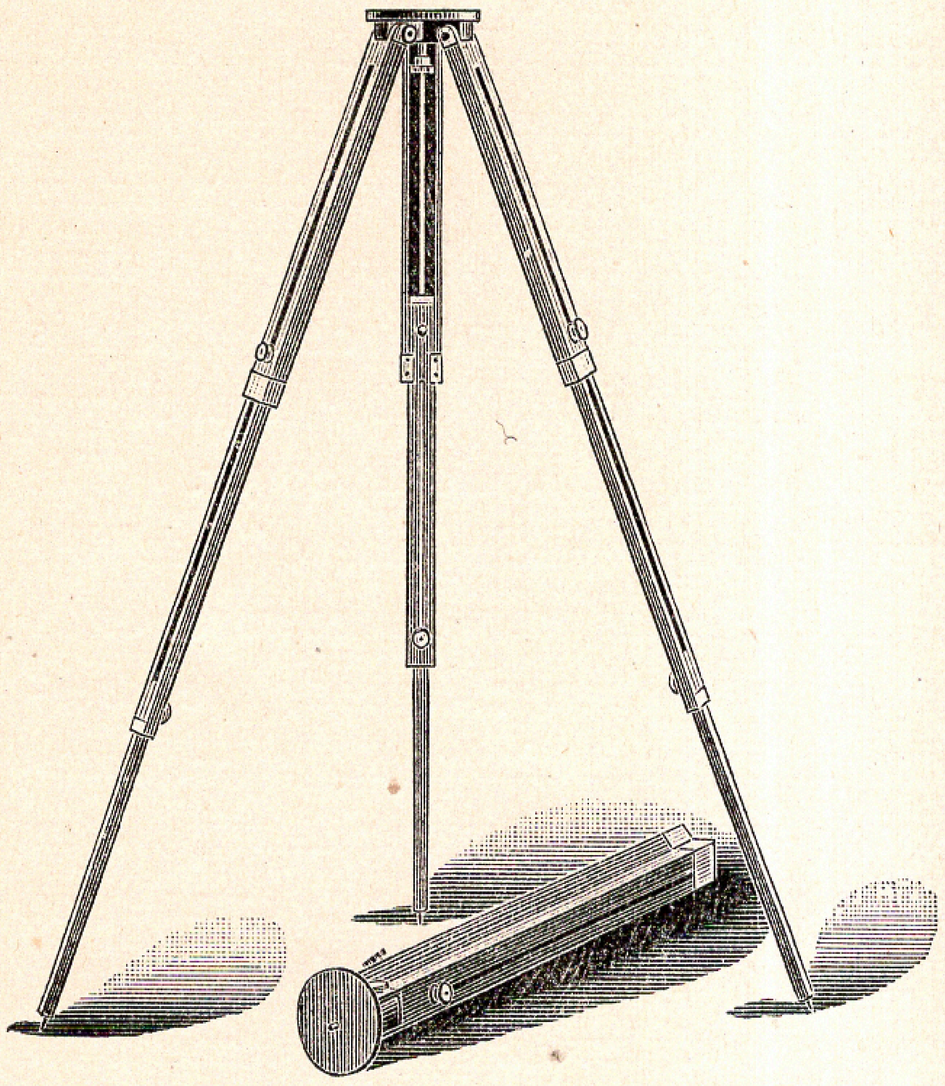
COMBINED SLIDING AND FOLDING.

This Tripod is one of the most convenient forms of tripod ever introduced. It is jointed in three lengths, and when closed is but 22 inches long. The tripod top is of wood, covered with cloth. As the lower section slides, the tripod has all the advantages of adjustment of the Sliding Tripod.

No. 1—For 3¼ x 4¼ to 4¼ x 6½,	$3 50
No. 2—For 5 x 8 and 6½ x 8½,	4 00
No. 3—For 8 x 10 and 10 x 12,	4 50
No. 4—For 11 x 14 and 14 x 17,	5 50
No. 5—For 17 x 20 to 20 x 24,	6 50

PERFECTION TRIPOD.

DOUBLE SLIDING.



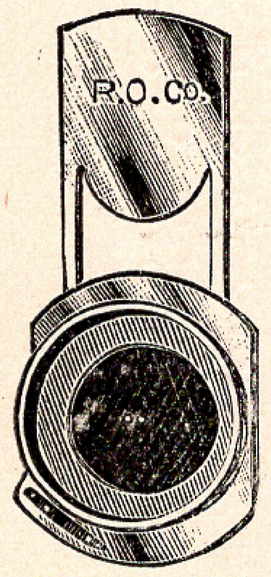
In design and finish this Tripod leaves nothing to be desired. It is thoroughly made, every point being as near *perfection* as possible.

The lower section slides within the second, which in turn is contained within the third, thus rendering the tripod quite compact when closed.

No. 1—For cameras 3¼ x 6½ to 4¼ x 6½, - - $5 50

No. 2—For cameras 5 x 7 to 8 x 10, - - - 6 00

R. O. CO.'S DROP SHUTTER.

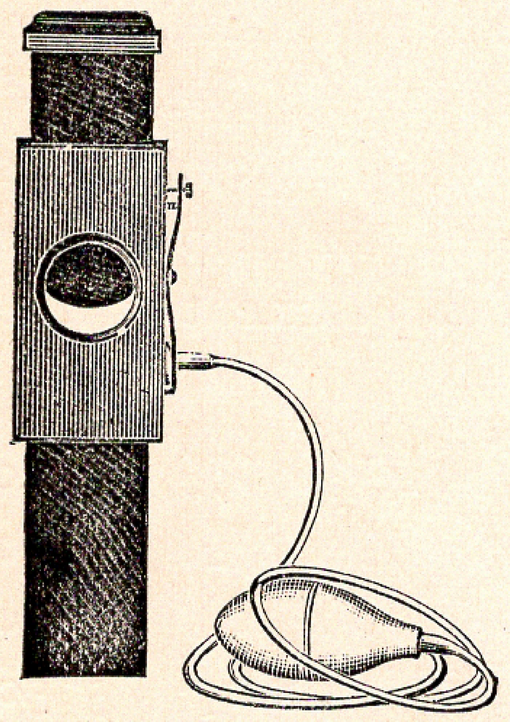


This is one of the neatest and best shutters in market, being simple, durable and convenient. The action can be hastened from the gravity drop to as quick an exposure as desired, by the use of a rubber band. It is made of brass, full nickeled.

It is made to fit all sizes of R. O. Co.'s Single View and Excelsior Lenses; also Nos. 1 and 2 Darlot Rapid Hemispherical, and will be made to fit any size up to 2¼ inch.

Price, for any of the above sizes, - $3 00

UNIVERSAL DROP SHUTTER.



This is a very simple yet effective form of shutter. The slide falls of its own weight when released, and by the use of a rubber band, any degree of rapidity may be obtained.

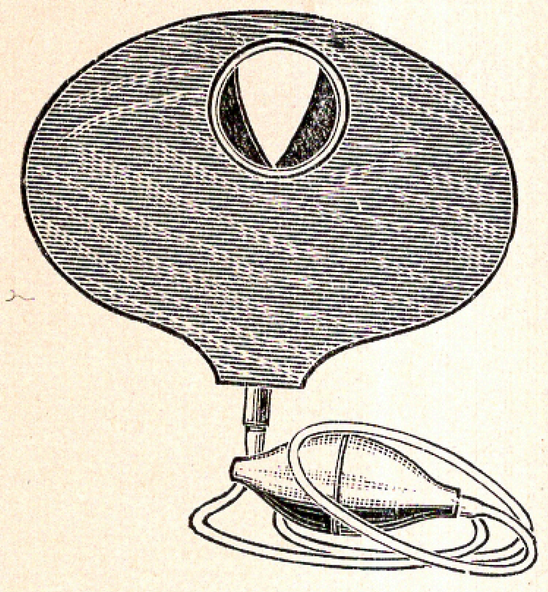
The body of the shutter being of mahogany, it has a very handsome appearance. A thin strip of rubber is placed in the top of the shutter to lessen the concussion caused by the falling slide.

Price, with spring release, - $1 25

With Britton's pneumatic release, bulb and tube, - 2 00

THE WELLER WING SHUTTER.

FOR TIME AND INSTANTANEOUS WORK.



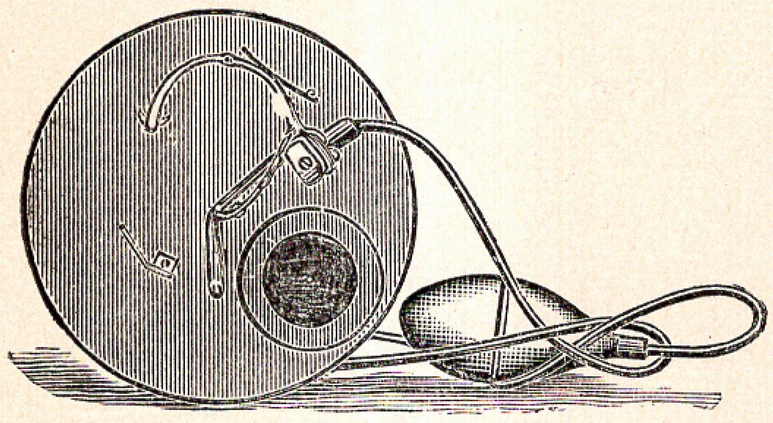
This is one of the best shutters in market for either the amateur or professional photographer.

The Weller Shutter is very simple in its construction and cannot well get out of order, and works with a minimum jar and is nearly noiseless.

The Weller Shutter is made to fit on end of lens and also to fit inside of camera box.

Price, - - - $5 00

HARVEY'S ROTARY SHUTTER.

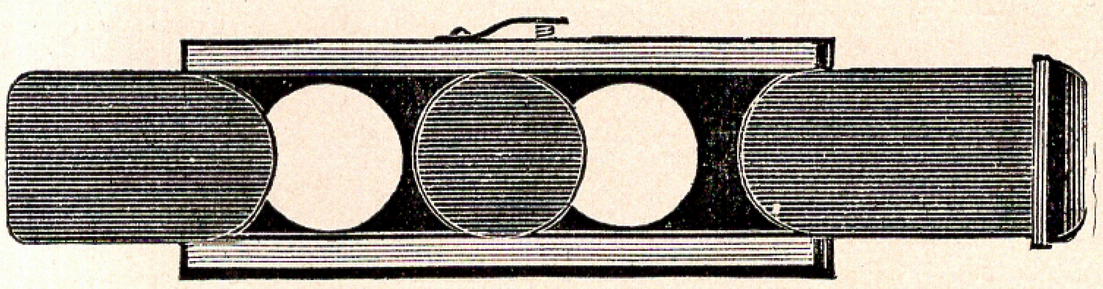


This is a most excellent shutter for amateurs. A circular plate of hard rubber revolves within a rim on the wooden body of the shutter.

It can be operated for both time and instantaneous, at any distance from the shutter. With Britton's pneumatic release rubber tube and bulb.

Price, - - - - - - - $3 50

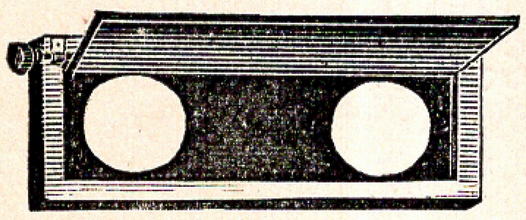
UNIVERSAL SHUTTER FOR STEREOSCOPIC LENSES.



This is similar to the Universal Drop Shutter except for two lenses, and as the slide moves horizontally, it is moved by a rubber band.

Price, - - - - - - - $1 75

CARLTON'S STEREOSCOPIC EXPOSER.



The Carlton Stereoscopic Exposer is not designed for instantaneous work, but rather is a device for exposing the two lenses simultaneously, though it can be done very rapidly indeed.

Price, - - - - - - - $2 00

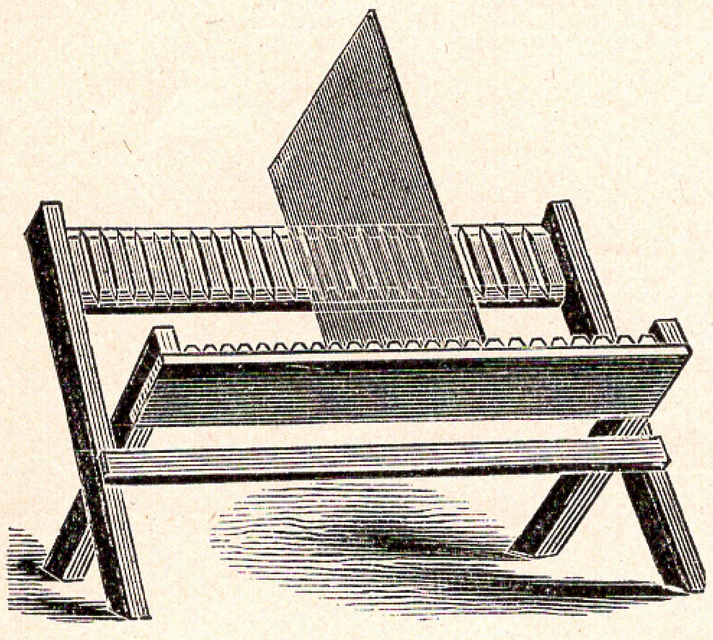
VIEW FINDER.

The View Finder is in reality a miniature camera, and is attached to the top of a view camera in taking instantaneous pictures.

The same view is seen on the screen of the Finder as is reflected in the camera, and by observing the screen of the Finder, the exact moment for exposure can be told.

Price, - - - - - - - $1 25

FOLDING NEGATIVE RACK.



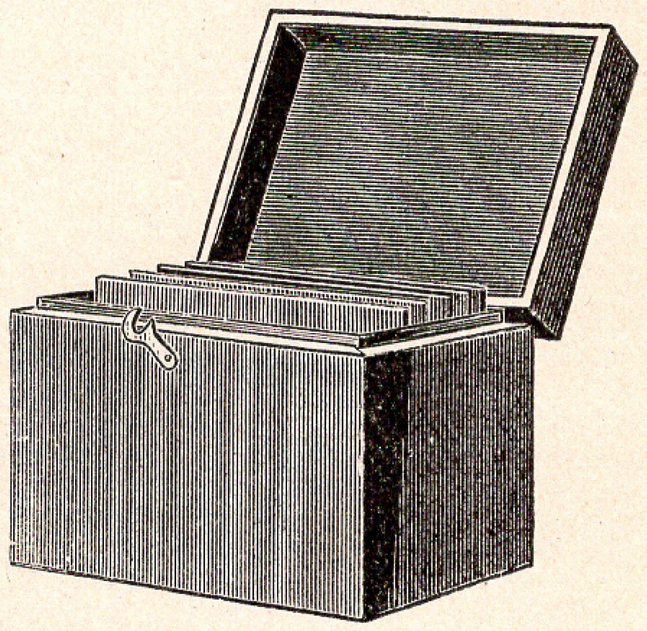
An inexpensive and very convenient accessory for the dark room, preventing the negatives from becoming scratched while drying. Holds 24 negatives.

Price, for plates up to 6½ x 8½, $0 40
Price, for plates 8 x 10 to 14 x 17, 70

NEGATIVE BOXES.

Made from selected whitewood, with hinged cover. Are exceedingly convenient for storing negatives. Each holds 24 plates.

3¼ x 4¼ -	$0 60	5 x 8 -	$0 70
4 x 5 - -	60	6½ x 8½ -	85
4½ x 6½ -	65	8 x 10 -	1 00
5 x 7 - -	70	10 x 12 - -	1 50



DRY PLATE SAFETY BOXES.

These are made similar to the Negative Box, but with all joints thoroughly broken, and are lined with black velvet, which prevents reflection.

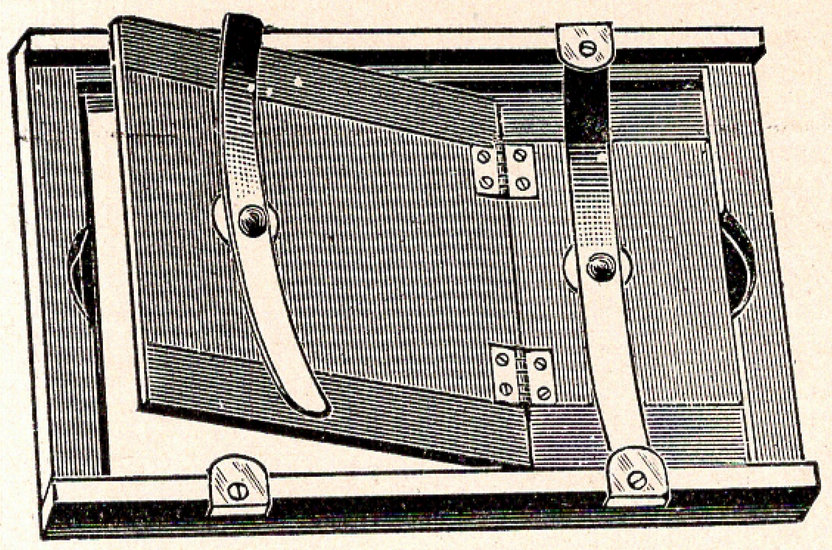
They are useful in the dark room, as the box of plates may be put in the safety box, saving wrapping and unwrapping them when filling the holders when in a hurry.

A lock and key can be furnished with each at 60 cents extra.

3¼ x 4¼, - - -	$0 75	5 x 8, - - -	$1 00
4 x 5, - - -	75	6½ x 8½, - -	1 20
4¼ x 6½, - - -	90	8 x 10, - - -	1 40
5 x 7, - - -	1 00	10 x 12, - -	2 00

FAVORITE PRINTING FRAMES.

3¼	x 4¼,	$0 40	5	x 8,	$0 55
4	x 5,	40	6½	x 8½,	60
4¼	x 6½,	45	8	x 10,	75
5	x 7,	50			



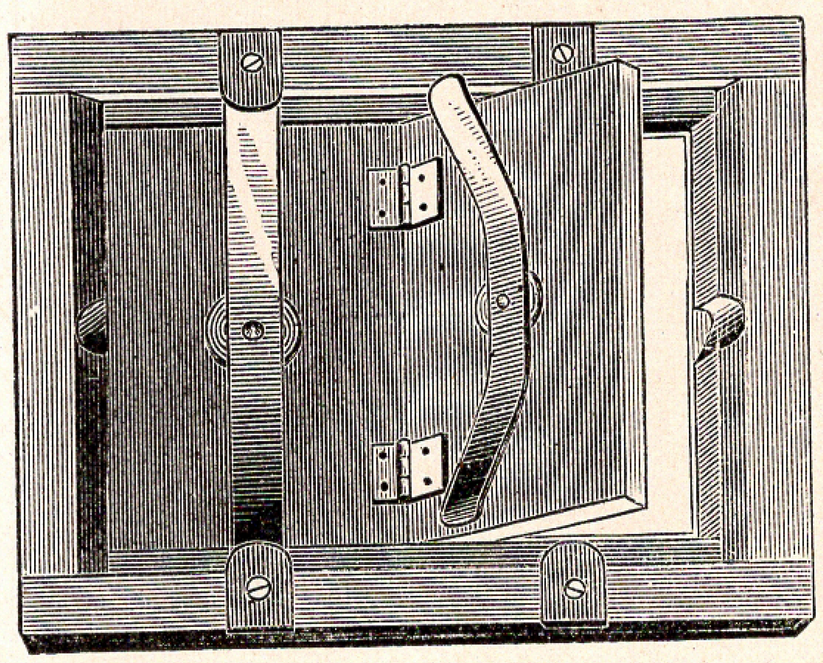
Having been requested to make a lighter Printing Frame than our regular flat frame, we comply, and place the Favorite on the market, with the full confidence that it will prove all that the name implies.

While the Favorite is much lighter than the ordinary flat printing frame, they are equal in strength and durability, making them especially desirable for amateurs.

These frames have the same style of catch, spring, etc., as R. O. Co.'s Flat Printing Frame; the backs also being cut in the same manner.

R. O. CO.'S FLAT PRINTING FRAMES.

3¼	x 4¼,	$0 40	8	x 10,	$0 75
4	x 5,	40	10	x 12,	1 00
4¼	x 6½,	45	11	x 14,	1 75
5	x 7,	50	14	x 17,	2 25
5	x 8,	55	16	x 20,	2 75
6½	x 8½,	60	17	x 20,	3 00

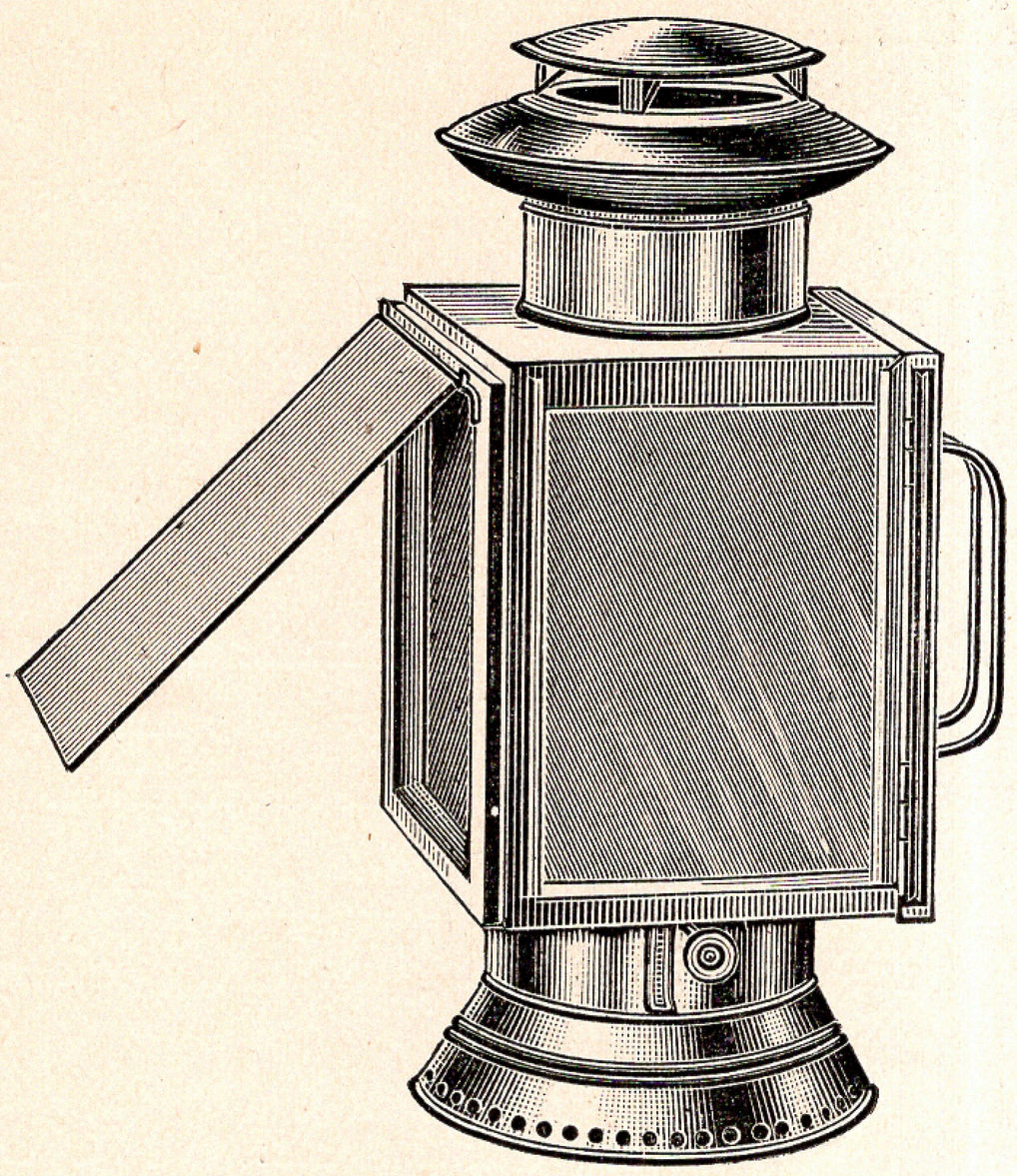


Our Printing Frames are constructed on an improved plan. The springs are fastened by rivets instead of screws, and have a washer placed under them to prevent wear on the wood-work.

The catch buttons are set into the wood flush with the top, thus preventing their turning.

The back is made to open at the center, or two-thirds, whichever style be wanted, though we find best sale for the latter as it allows more of the print to be seen during printing.

IDEAL LANTERN.



We claim this is the best lantern for the dark room yet placed on the market. By an improved method of ventilation, and by use of a superior burner, the combustion is perfect, so that when the wick is turned up for a strong light there is no smoke, and when turned low for a weak light there is no flickering, but the flame is perfectly steady throughout.

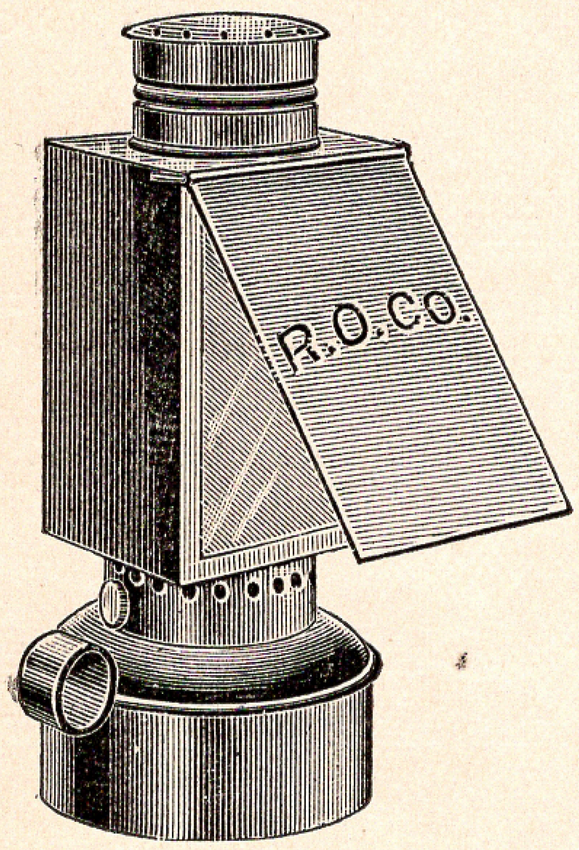
There are three sides for light, each of which has double glass, one sheet each, Orange and Ruby, which combination makes a perfectly safe light.

The front side is provided with a shield to protect the eyes, and also to reflect the light down toward the developing tray. It also has a silvered reflector, thus increasing the volume of light.

If desired, one side may be used for making transparencies or for printing with bromide paper, by using a sheet of ground glass in place of the Orange, and a tin slide or shield in place of the Ruby.

Price, - - - - $3 00

THE UNIVERSAL RUBY LANTERN.



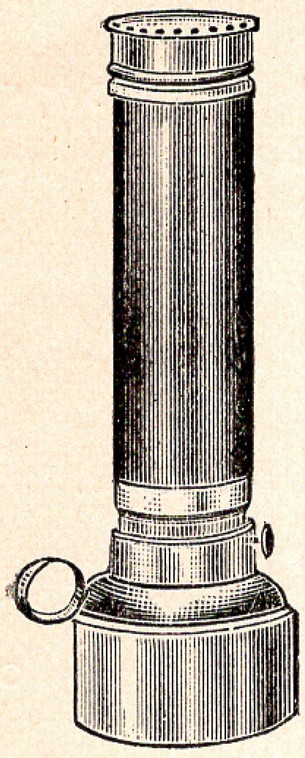
The Universal Ruby Lantern is indeed the best Dry Plate Lantern for the price in market, it being the only really good dark room lantern at so low a price.

The ventilation is perfect, and the volume of light is ample for the purpose of the ordinary amateur.

To light the Universal Lantern, the glass is raised in the slide. The light is controlled from the outside.

Price, - - $1 00

THE GEM RUBY LAMP.



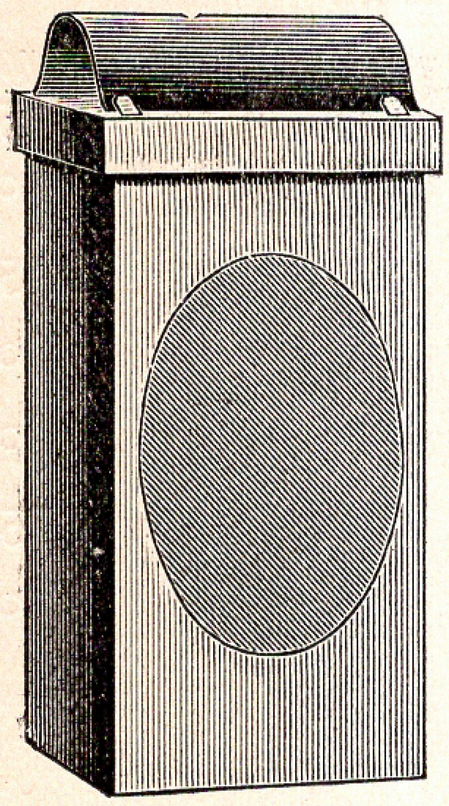
The Gem Ruby Lamp is one of the neatest lamps for dark-room purposes ever placed on the market. It gives an abundance of safe light for all the purposes of the ordinary amateur, and the ruby chimney being round, the light is emitted in all directions.

The Gem is the most compact lamp in market, and can be carried on a trip with no inconvenience.

To light the Gem Lamp the ruby chimney is removed, same as on an ordinary house lamp.

Price, - - - - $1 00

FOLDING CANDLE LANTERN.

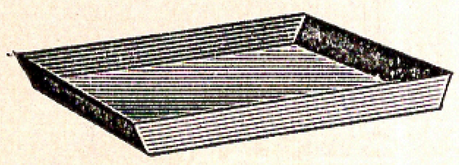


This is the best lantern ever made for traveling, folding into very small space. The top and bottom both are removed and the body of the lantern folds perfectly flat, and all packs into a box which is but one inch deep.

The lantern contains no glass, Ruby Fabric being used instead.

Price, - - - $0 75

JAPANNED TIN DEVELOPING TRAYS.



4 x 5, -	$0 20	6½ x 8½, -	$0 30
5 x 8, - -	25	8 x 10, - -	40

VULCANIZED RUBBER TRAYS.

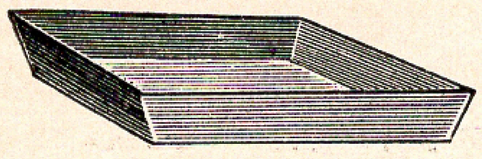


The neatest Developing Tray yet introduced is that made from vulcanized rubber. It has a polished surface, thus it is readily kept clean.

	SHALLOW.	DEEP.
4 x 5,	$0 30	$0 60
5 x 8,	60	80
6½ x 8½,	75	90
8 x 10,	1 10	1 25

PAPIER MACHE TRAYS.

FOR DEVELOPING.

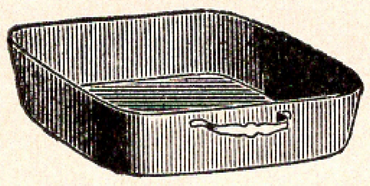


4 x 5, -	$0 35	6½ x 8½, -	$0 75
5 x 8, - -	60	8 x 10, - -	1 10

AGATE-WARE PANS.

FOR TONING PRINTS.

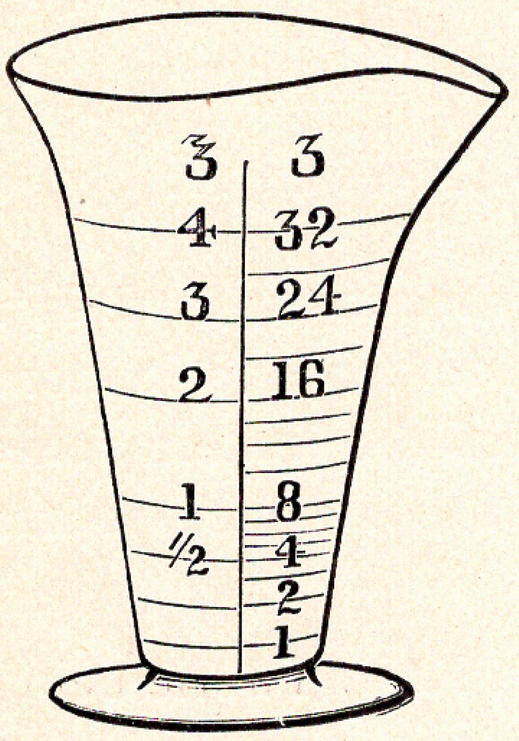
Stronger and lighter than porcelain, and not liable to breakage.



7 x 9, - -	$1 00	10 x 12, -	$1 50
8 x 10, - -	1 25	12 x 14, - -	1 80

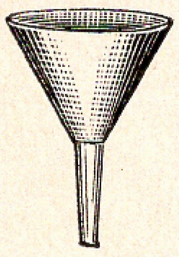
GRADUATED GLASSES.

FOR MEASURING LIQUIDS.



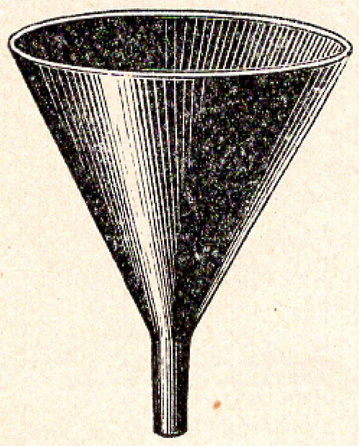
Minim, - - - - - - - -	$0 25
1 ounce, - - - - - - - -	20
2 " - - - - - - - -	25
4 " - - - - - - - -	30
8 " - - - - - - - -	40
12 " - - - - - - - -	55
16 " - - - - - - - -	70

GLASS FUNNELS.



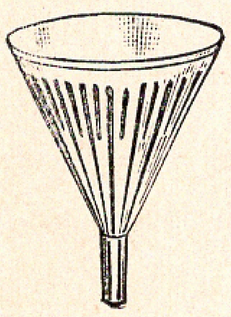
½ Pint, -	$0 15	1 Quart, -	$0 25
1 " - -	20	2 " - -	30

PAPIER MACHE FUNNELS.



½ Pint, -	$0 30	1 Quart, -	$0 50
¾ " - -	35	1½ " - -	70
1½ " - -	40	2 " - -	90

FLUTED GLASS FUNNELS.



The Fluted Funnel is the best glass funnel made, being very strong. The outside of the neck being fluted allows air to pass through and prevents choking up the neck of the bottle.

½ Pint, - -	$0 20	1 Quart, - -	$0 30
1 " - - -	25	2 " - - -	45

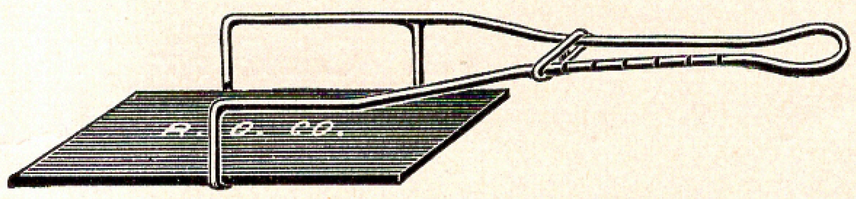
GLASS FORMS.

Stereoscopic, Arched Top,	$0 50	5 x 7, Square Corners,	$0 60
3¼ x 4¼, Square Corners,	40	5 x 8, " "	70
4 x 5, " "	45	6½ x 8½, " "	80
Cabinet, " "	50	8 x 10, " "	1 00
4¼ x 6½, " "	55		

ABSORBENT COTTON.

2 oz. Parcel, - -	$0 20	8 oz. Parcel, - -	$0 50
4 oz. " - - -	30	1 lb. " - -	80

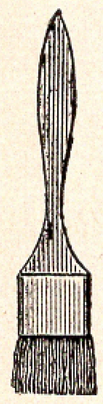
DEVELOPING TONG.



A very convenient article for development, avoiding the necessity of handling the plate with the fingers.

No. 1—For Plates 3¼ x 4¼ to 6½ x 8½, - $0 30
No. 2—For Plates 5 x 7 to 8 x 10, - - - 35

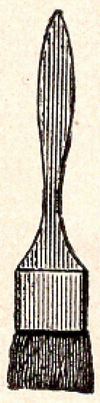
BRISTLE BRUSHES.



For mounting photographs, also good for dusting out plate holders.

1 inch wide -	$0 10	2½ inches wide, -	$0 25
1½ " " - -	15	3 " " - -	30
2 " " -	20		

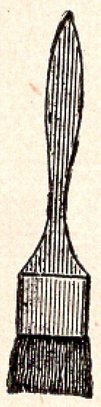
SIBERIAN BRUSHES.



For dusting plates or holders.

1 inch wide, -	$0 20	2½ inches wide, -	$0 50
1½ " " - -	30	3 " " - -	60
2 " " -	40		

CAMEL'S HAIR BRUSHES.



Very soft, for dusting off plates.

1 inch wide, -	$0 25	2½ inches wide, -	$0 60
1½ " " - -	40	3 " " - -	80
2 " " -	50		

BLOTTING PAPER.

9 x 12 inches, per dozen sheets, - - - - - -	$0 30
12 x 19 " " " " - - - - - -	60
19 x 24 " " " " - - - - - -	1 20

NEGATIVE PRESERVERS.

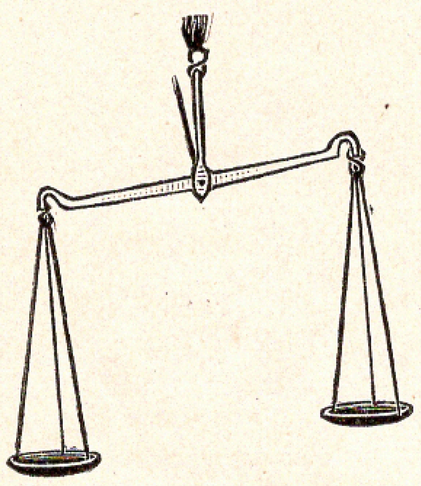
These are envelopes made of strong manilla paper, the proper size for the negative; they are open at the end for inserting the negative, and have space cut for admitting the thumb and finger in removing it.

On the face are printed lines for name, number, description and remarks. They are invaluable for preserving the negative from dust, scratches, etc. Put up in packages of fifty each.

3¼	x	4¼,	per package,	$0	20	5	x	8,	per package, $0 30
4	x	5,	"	"	20	6½	x	8½,	" " 35
4¼	x	6½,	"	"	25	8	x	10,	" " 45
5	x	7,	"	"	30	10	x	12,	" " 75

FOCUSING CLOTHS.

Gossamer Rubber, - - - - - - $0 60
Velvet, - - - - - - - - - 1 00

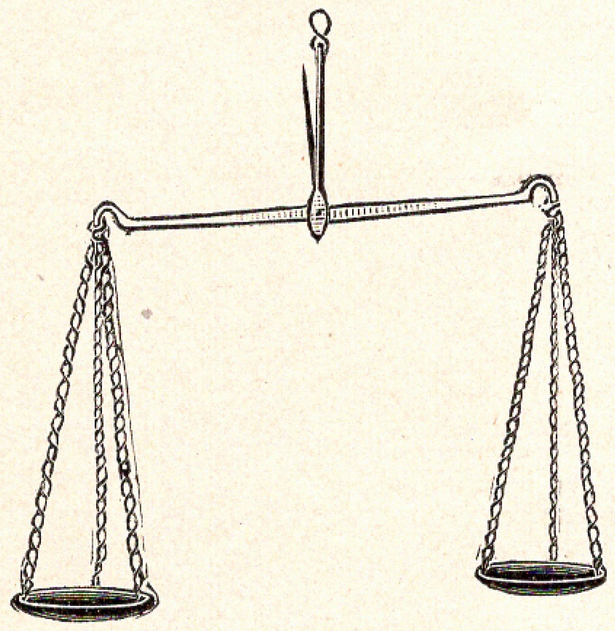


POCKET SCALES.

For weighing small quantities this scale is especially designed and well adapted to the use of the ordinary amateur, and is excellent for travelling.

Weighs grains and drams.

5-inch beam, 2-inch brass pans, $0 60
6-inch beam, 2-inch brass pans, 75

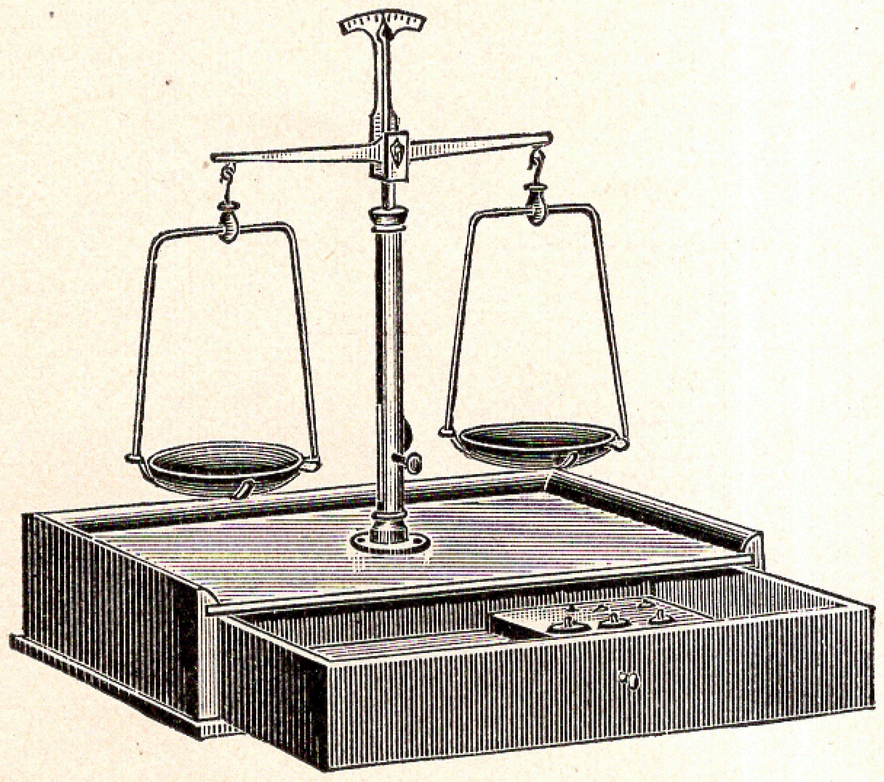


HAND SCALES.

Somewhat larger than the Pocket Scale, and with larger pans, so that it is adapted to weighing a greater quantity.

Weighs grains, scruples and drams.

6-nch beam 2½-inch pans, - - $2 00
9-inch beam, 4½-inch pans, - - - 2 50



STANDARD SCALE.

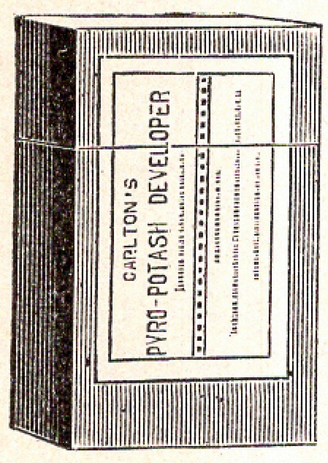
This is the best scale for the varied wants of both professional and amateur photographers.

The entire scale is taken apart and packs in the drawer of the walnut stand.

Price, - - $4 00

CARLTON'S PYRO-POTASH DEVELOPER.

CONCENTRATED.



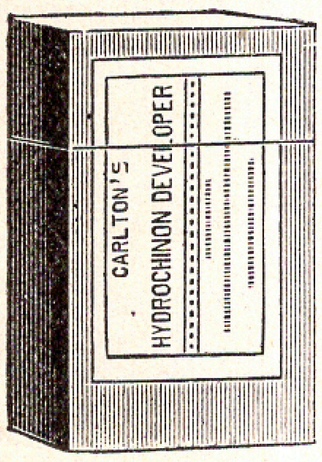
We claim for this developer that more can be done with a plate than almost any developer in the market; the operator has almost perfect control over the plate, and brilliant negatives is the rule.

Put up in two 8-oz. bottles, in card-board box.

Per box, - - 60 cents.

CARLTON'S HYDROCHINON DEVELOPER.

CONCENTRATED.



Will not stain the fingers or plate; gives clear shadows; especially desirable for transparencies,

Can be used over and over again.

Put up in two 8-oz. bottles, in card-board box.

Per box, - - 50 cents.

CARLTON'S EIKONOGEN DEVELOPER.

Easy of manipulation, giving brilliant yet soft negatives; especially adapted for portraiture. Can be used over and over again.

Put up in one 16 oz. bottle. Price, 50 cents.

TONING SOLUTION.

FOR TONING ARISTOTYPE PAPER.

Can be used continually until completely used up.

8 ounce, - - - - 50 cents.

CREAM PASTE.

FOR MOUNTING PHOTOGRAPHS.



½	Pint, - - - - - - - -	$0 20
1	" - - - - - - - -	25
1	Quart, - - - - - - - -	45

DRY PLATES.

We sell several makes of Dry Plates, among them being Forbes', Cramer's, Seed's and Carbutt's.

3¼ x 4¼,	per dozen,	$0 45		8 x 10,	per dozen,	$2 40	
4 x 5,	"	65		10 x 12,	"	3 80	
4¼ x 6½,	"	90		11 x 14,	"	5 00	
5 x 7,	"	1 10		14 x 17,	d'ble thick,"	9 00	
5 x 8,	"	1 25		16 x 20,	" " "	12 50	
6½ x 8½.	"	1 65		18 x 22,	" " "	15 50	

OTHER ACCESSORIES.

Hypo-Sulphite Soda, (1 lb. box),	each,	$0 10
" " " (5 lb. box),	"	40
Pyrogallic Acid,	per ounce,	50
Hydrochinon,	" "	70
Eikonogen,	" "	50
Meta-bisulphite of Potash,	" "	40
Carbonate of Soda,	" "	5
Carbonate of Potash,	per pound,	25
Sulphite of Soda,	" "	25
Chloride of Gold, (15 grain bottle),	each,	75
Acetate of Soda, (2 oz. bottle),	"	10
Negative Varnish, (4 oz. bottle),	"	40
Concentrated Intensifier, (4 oz. bottle),	"	25
Bromide Ammonia,	per ounce,	5
Bi-Carbonate of Soda,	" "	5
Borax,	" "	5
Tungstate of Soda,	" "	15
Chloride of Lime,	" "	5
Magnesium Powder,	" "	50

READY SENSITIZED ALBUMEN PAPER.

This paper is imported by us and will be found to be of the finest quality and of uniform sensitiveness, and will tone rapidly and evenly.

Put up in light-tight packages of two dozen sheets, except 18 x 22, which are in rolls of one dozen sheets.

3¼ x 4¼,	per package,	$0	35	5 x 8,	per package,	$0	85
4 x 5,	" "		45	6½ x 8½,	" "	1	10
4¼ x 6½,	" "		60	8 x 10,	" "	1	65
5 x 7,	" "		80	18 x 22,	per roll,	2	25

FERRO-PRUSSIATE OR BLUE PAPER.

FOR MAKING BLUE OR WHITE PICTURES.

This paper is prepared after an improved formula, and the chemical qualities are perfect.

This paper is coated on Rives' photographic paper, same as is used with the best albumen paper. Most Ferro-Prussiate paper is coated on a domestic paper, which is not so fine and smooth.

Put up in light-tight packages of two dozen sheets.

3¼ x 4¼,	per package,	$0	20	5 x 8,	per package,	$0	40
4 x 5,	" "		20	6½ x 8½,	" "		50
4¼ x 6½,	" "		30	8 x 10,	" "		75
5 x 7,	" "		35				

BROMIDE PAPER.

"A"—Smooth surface, thin, for proofs and positive printing.
"B"—Smooth surface, heavy, for positive printing and enlarging.
"C"—Rough surface, heavy, for enlarging and working in crayon.

PRICE LIST, "A," "B" OR "C."

3¼ x 4¼,	per doz., -	$0	25	5 x 8,	per doz., -	$0	75
4 x 5,	" " - -		40	6½ x 8½,	" " - -	1	10
4¼ x 6½,	" " -		55	8 x 10,	" " -	1	50
5 x 7,	" " - -		65	10 x 12,	" " - -	2	25

ARISTOTYPE PAPER.

This paper gives superior results and is largely taking the place of Albumen paper for professional and amateur use. Aristotype Paper is exceedingly simple in manipulation which is much in its favor.

3 x 4	- - -	$0	25	5 x 7	- - -	$0	40
4 x 5	- - -		30	5 x 8	- - -		50
4 x 6	- - -		35	6½ x 8½	- - -		90
4¼ x 6½	- - -		38	8 x 10	- -	1	10

CARD MOUNTS.

Card Mounts are cards on which to place the finished print.

The appearance of the finished photograph depends in no small degree on the manner in which it is mounted. A good photograph is worthy of a good card mount, while a poor one is not worth mounting at all.

The sizes given are the size of the print, the actual size of the card mount being larger to allow a margin.

Put up in packages of two dozen each.

No. 1—*Plain, assorted colors.*

4 x 5,	per pkg.,	$0	20
Cabinet,	"		25
4¼ x 6½,	"		30
5 x 7,	"		35
5 x 8,	"		40
6½ x 8½,	"		60
8 x 10,	"		80

No. 2—*Unenameled back and face, assorted colors.*

4 x 5,	per pkg.,	$0	25
Cabinet,	"		30
4¼ x 6½,	"		35
5 x 7,	"		45
5 x 8,	"		50
6½ x 8½,	"		75
8 x 10,	"	1	00

No. 3—*Rose tint, with gold beveled edge.*

4 x 5,	per pkg.,	$0	30
Cabinet,	"		35
4¼ x 6½,	"		40
5 x 7,	"		55
5 x 8,	"		60
6½ x 8½,	"		80
8 x 10,	"	1	00

No. 4—*Gray, with wide border, for framing.*

4 x 5,	per pkg.,	$0	45
4¼ x 6½,	"		50
5 x 8,	"		65
6½ x 8½,	"		80
8 x 10,	"	1	00

No. 5—*Amber, unenameled, with gold beveled edge.*

4 x 5,	per pkg.,	$0	40
Cabinet,	"		45
4¼ x 6½,	"		50
5 x 7,	"		60
5 x 8,	"		65
6½ x 8½,	"	1	00
8 x 10,	"	1	40

No. 6—*Bottle Green, with gold beveled edge.*

4 x 5,	per pkg.,	$0	50
Cabinet,	"		60
4¼ x 6½,	"		70
5 x 7,	"		85
5 x 8,	"		90
6½ x 8½,	"	1	20
8 x 10,	"	1	75

No. 7—*Maroon face, gray back, with gold beveled edge.*

4 x 5,	per pkg.,	$0	50
Cabinet,	"		60
4¼ x 6½,	"		70
5 x 7,	"		85
5 x 8,	"		90
6½ x 8½,	"	1	20
8 x 10,	"	1	75

No. 8—*Chocolate, with wide border for framing.*

4 x 5,	per pkg.,	$0	50
4¼ x 6½,	"		60
5 x 8,	"		80
6½ x 8½,	"	1	00
8 x 10,	"	1	20

EXTRA PARTS OF APPARATUS.

HOLDER SLIDES.

3¼ x 4¼,	$0 15	5 x 8,	$0 20
4 x 5,	15	6½ x 8½,	25
4½ x 6½,	20	8 x 10	30
5 x 7,	20		

Add 50 per cent. if made of hard rubber.

FRONT BOARDS.

To fit New Model,	$0 25
" New Model Improved, Peerless or Standard,	40
" Ideal or Universal,	50
Front Board and division for Stereo. work,	50

GROUND GLASS FOR CAMERAS.

3¼ x 4¼,	$0 15	6½ x 8½,	$0 25
4 x 5,	15	8 x 10,	35
4½ x 6½,	20	10 x 12,	50
5 x 7,	20	11 x 14,	75
5 x 8,	20	14 x 17,	1 00

Caps for R. O. Co.'s Single View Lenses, each,	25	cents.
" " " Excelsior " "	40	"
Diaphragms for Excelsior Lens, per set,	75	"
Morocco Case for Diaphragms for Excelsior Lens,	50	"
Flanges for R. O. Co. Single View Lens,	50	"
" " Excelsior Lens,	75	"
Spring-catch, for holding holder on New Model, each,	25	"
Tripod Head for Standard Tripod,	50	"
Wood Head for Combination Tripod,	50	"
Reversing Attachment for New Model,	50	"
Tripod Screws, each,	30	"
Clamp-Hooks for holding folding bed rigid,	25	"
Clamp and Screw for leg of Sliding Tripod,	50	"
Milled Heads with Screw for various uses,	25	"
" " without " " " "	20	"
Ruby Glass for Universal Lantern,	10	"
Ruby or Orange Glass for Ideal Lantern,	15	"
Ruby Chimney for Gem Lantern,	25	"

CHEMICAL OUTFIT.

FOR PRODUCING THE NEGATIVE.

The Chemicals and articles which should accompany any of our cameras, and with which the picture is made, consist of the following articles, arranged in sizes according to the size of camera used: Two Japanned Tin Developing Trays; one dozen Dry Plates; one 4-oz. Graduated Glass; one box Carlton's Hydrochinon Developer; one 1-pound box Hypo-Soda; one Universal Ruby Lantern; one copy *Amateur Photographer;* one Gossamer Focusing Cloth.

Above arranged for

3¼ x 4¼	camera,	$3 40	5 x 8	camera,	$4 25
4 x 5	"	3 50	6½ x 8½	"	4 75
4¼ x 6½	"	3 90	8 x 10	"	5 75
5 x 7	"	4 20			

PRINTING OUTFIT.

FOR PRINTING, TONING, AND FINISHING THE PICTURE.

One Printing Frame; one package Sensitized Albumen Paper; one 2-oz. bottle Acetate of Soda; one 15-grain bottle Chloride of Gold; one package Card Mounts; one ½-pint jar Cream Paste.

Above arranged for

4 x 5	camera,	$2 00	5 x 8	camera,	$2 70
4¼ x 6½	"	2 35	6½ x 8½	"	3 20
5 x 7	"	2 50	8 x 10	"	4 00

TO AMATEURS.

We omit the usual "Outfit Department," which we deem unnecessary, as our cameras are complete with the exception of the Ideal, Standard, Universal, and 8 x 10 New Model, New Model Improved and Peerless, which we list in this way for the reason that most people who buy the best class of camera, and especially the larger sizes, prefer one of the higher grade of lens, and many people, especially professionals, have one or more lenses and tripods, and wish only the camera, without these articles.

Should you select one of these cameras, you have only to add price of lens and tripod selected, which makes the camera complete.

To the price of the complete camera add the price of the Chemical and Printing outfits, corresponding to the size of camera selected, which will be *everything necessary* to take pictures.

R. O. CO.'S SINGLE VIEW LENS.

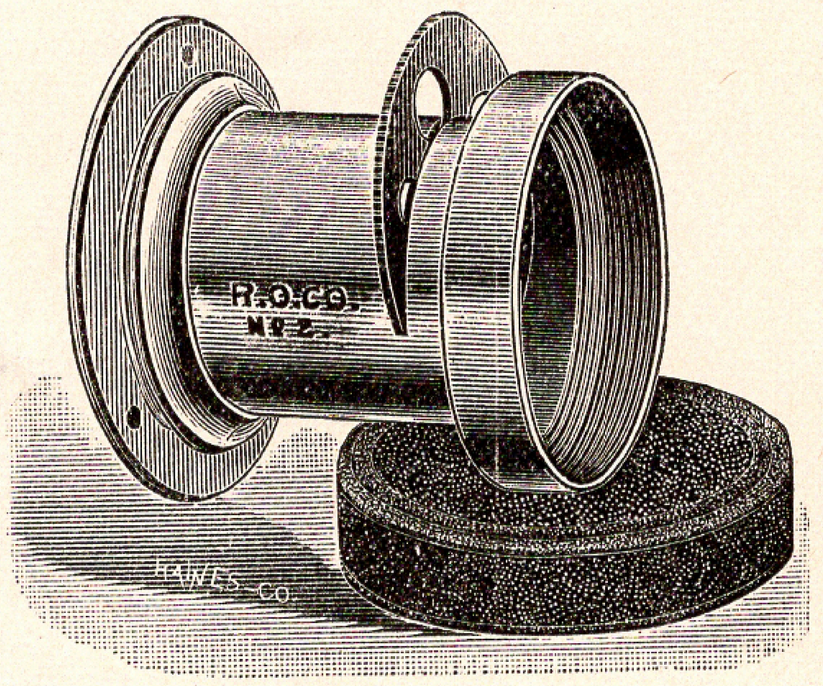
These Lenses are conceded to be the best of the low priced Lenses, giving a wonderful definition, with great depth of focus, and flatness of field, especially when using the smaller diaphragms. They are perfectly achromatic, and are as near rectilinear as is possible in a Single Combination Lens and are quick working.

These Lenses are furnished with *rotating diaphragms*, having four apertures, and are very convenient to use; the largest aperture is large enough for instantaneous views.

Though designed for landscape work they will make excellent groups, and even portraits.

NO.	LENGTH OF FOCUS.	SIZE.	PRICE.
1	6 inch	4 x 5,	$3 00
1½	8 "	4¼ x 6½	3 50
2	10 "	5 x 8,	4 00
3	11 "	6½ x 8½	5 00
4	13 "	8 x 10,	7 00

No. 1 furnished in matched pairs for stereoscopic work at $6.00

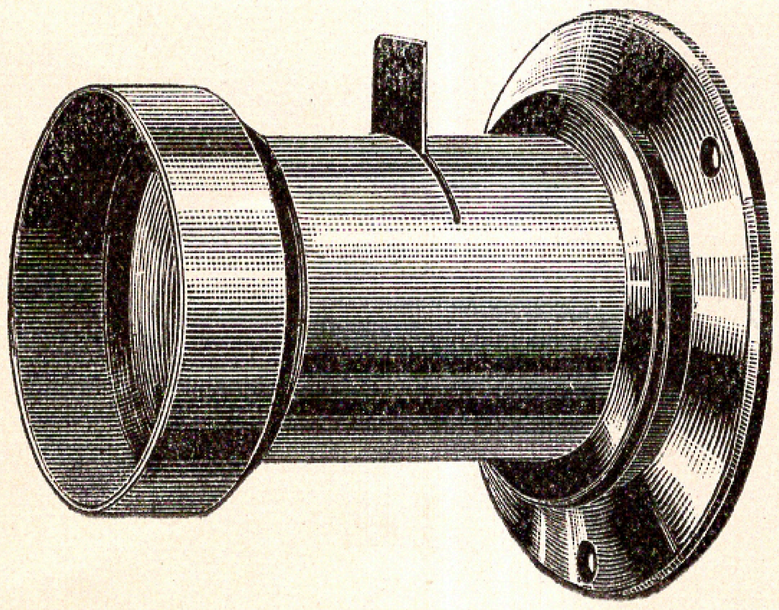


R. O. CO.'S EXCELSIOR LENS.

RAPID RECTILINEAR.

The Excelsior Lens was made to meet the wants of the amateur who desires a better Lens than our Single View Lens, and yet at a moderate outlay, and it has acquired a popularity quite beyond our expectations. We confidently think they are the best value of any lens, and are equal to many lenses at a much higher price.

They are perfectly rectilinear, have great depth of focus and flatness of field, giving brilliant definition; they will be found excellent for landscapes, architectural subjects, and instantaneous work, as well as groups and portraits.



NO.	LENGTH OF FOCUS.	SIZE.	PRICE.
1	7 inches,	4 x 5,	$10 00
2	9 "	5 x 8,	13 50
3	11 "	6½ x 8½,	18 00
4	13 "	8 x 10,	22 00

Furnished with full set of diaphragms in morocco case.

RAPID RECTILINEAR LENSES.

The class of lens best suited to the varied wants of the Amateur, is what is called the Rapid Rectilinear series. They embrace an angle of from 60 to 75 degrees, and are well adapted for portraiture, groups, architectural subjects, instantaneous work, and general landscapes.

The following are among the best known lenses of the Rapid Rectilinear series:

DARLOT RAPID HEMISPHERICAL LENS.

No.	LENGTH FOCUS.	SIZE VIEW.	PRICE.
1	5½ inches,	4 x 5	$15 00
2	9 "	5 x 8	25 00
3	10½ "	8 x 10	35 00
4	14 "	11 x 14	50 00

BECK'S "AUTOGRAPH" RECTILINEAR LENS.

No.	LENGTH FOCUS.	SIZE VIEW.	PRICE.
1	6¾ inches,	4 x 5	$30 00
3	8¾ "	5 x 8	35 00
4	11 "	6½ x 8½	50 00
5	13 "	8 x 10	60 00
6	16 "	10 x 12	75 00

BAUSCH & LOMB OPTICAL CO.'S "UNIVERSAL."

No.	LENGTH FOCUS.	SIZE VIEW.	PRICE.
1	5¾ inches,	4 x 5	$28 00
2	7½ "	5 x 8	34 00
3	10½ "	6½ x 8½	42 00
4	14¼ "	8 x 10	58 00
5	15 "	10 x 12	73 00

GUNDLACH'S RAPID RECTIGRAPHIC LENS.

No.	LENGTH FOCUS.	SIZE VIEW.	PRICE.
1	5½ inches,	4 x 5	$20 00
2	7¼ "	5 x 8	30 00
3	10 "	6½ x 8½	38 00
4	12 "	8 x 10	50 00
5	15 "	10 x 12	64 00
6	17 "	11 x 14	76 00

VOIGTLÆNDER'S EURYSCOPE.

No.	LENGTH FOCUS.	SIZE.	PRICE.
0	4½ inches,	4 x 5	$27 00
1	8 "	5 x 8	45 00
2	10 "	6½ x 8½	52 00
3	11½ "	8 x 10	65 00
5	14 "	11 x 14	87 00

THE SUTER APLANATIC LENS.

No.	LENGTH FOCUS.	SIZE.	PRICE.
2	6¾ inches,	4 x 5	$28 00
3	8¾ "	5 x 8	30 00
4	10¼ "	6½ x 8½	40 00
5	14¼ "	8 x 10	50 00

ROSS' RAPID SYMMETRICAL LENS.

No.	LENGTH FOCUS.	SIZE.	PRICE
1	6 inches,	4 x 5	$34 00
2	8½ "	5 x 8	46 00
3	11 "	6½ x 8½	52 00
4	13 "	8 x 10	68 00
5	16 "	10 x 12	84 00

ROSS' PORTABLE SYMMETRICAL LENS.

No.	LENGTH FOCUS.	SIZE.	PRICE.
3	5 inches,	4 x 5	$28 00
4	6 "	5 x 8	32 00
6	8 "	6½ x 8½	48 00
8	10 "	8 x 10	64 00

FRANCAIS' RAPID RECTILINEAR LENS.

No.	LENGTH FOCUS.	SIZE.	PRICE.
2	7 inches,	4 x 5	$32 00
3	8 "	5 x 8	38 00
4	12 "	6½ x 8½	50 00
5	14 "	8 x 10	63 00
6	17 "	10 x 12	84 00

WIDE ANGLE LENSES.

Wide angle lenses are used mostly for street views, architectural effects in confined situations, and interiors, embracing as they do an angle of from 90 to 100 degrees, they admit of being much nearer to the object photographed. They are not so quick working as those of ordinary angles. The principal objection to their more general use is that, on account of the great width of angle, the perspective is exaggerated, objects in the foreground being unduly magnified.

EXCELSIOR WIDE ANGLE LENS.

No.	LENGTH FOCUS.	SIZE.	PRICE.
1	3½ inches,	4 x 5	$10 00
2	5 "	5 x 8	15 00
3	6½ "	6½ x 8½	18 00
4	8 "	8 x 10	22 00

DARLOT'S WIDE ANGLE HEMISPHERICAL.

No.	LENGTH FOCUS.	SIZE.	PRICE.
2	3 inches,	4 x 5	$15 00
3	5 "	5 x 8	20 00
4	8 "	8 x 10	25 00

BECK'S "AUTOGRAPH" WIDE ANGLE.

No.	LENGTH FOCUS.	SIZE.	PRICE.
1	3 inches,	4 x 5	$25 00
2	4 "	5 x 8	30 00
3	5 "	6½ x 8½	37 50
4	7 "	8 x 10	50 00

WIDE ANGLE EURYSCOPE.

No.	LENGTH FOCUS.	SIZE.	PRICE.
0	4½ inches,	4 x 5	$29 00
1	5½ "	5 x 8	34 00
3	6½ "	6½ x 8½	39 00
4	7½ "	8 x 10	48 00

THE

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